Doctor James J
Hartman
with the respect &
gratitude of
His friend &
servant.
James Bernard -
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SANITY OF MIND

A STUDY OF ITS CONDITIONS, AND OF THE MEANS TO ITS DEVELOPMENT AND PRESERVATION

BY

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INTRODUCTORY NOTE

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D. F. LINCOLN.

BOSTON, June 1, 1900.

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SANITY OF MIND

SANITY OF MIND

CHAPTER I

THE OUTLOOK

Every gift of noble origin
Is breathed upon by Hope's perpetual breath.
Wordsworth, Sonnets.

A SATISFACTORY, workable mind, useful to itself and its neighbors, on which one relies as upon a well balanced and solidly mounted machine, is the product of an inconceivably complex series of causes, remote and near. Heredity is perhaps the first thing that occurs to our mind when the cause of its good or bad quality is asked for. The influence of ancestry is a profound problem; and it must be confessed that this influence seems more mysterious, its ramifications more extraordinary and more nearly universal, in proportion to our study of it.

Intermingled with inherited traits there are a hundred accidents and stresses in daily life which put the workmanship of the machinery to the test, and often derange it. The problem, whether the

accident or the weakness of the original construction has most to do with the calamity, is an ever-present one, not to be solved by generalizations.

Children cannot choose their own ancestry, but the public may decree that fewer worthless children shall be born of mindless parents. Public duties to children begin before their birth. And when born, the duty of guiding their education commences at once. Childhood offers possibilities in the way of *education for sanity* that are little appreciated. Our very conception of what elementary education means will have to be revolutionized before these opportunities are fully grasped.

The possibilities of improvement are greater, I think, than the public suspect. There is comparatively little to be done for middle life with its confirmed habits — there is an indefinite field for improvement among the young. There are public duties in this direction not yet attended to, which offer reasonable promise of large diminutions in crime and insanity; of which more hereafter.

I think myself warranted in saying that we have a right to a certain optimism in regard to the effects of the laws of heredity and of training, as a whole. There has been a change, too, in public feeling in these matters. Where there once was an overpowering sense of the unfailing and all-sufficing causality of what was called Law; of the absolute dependence of phenomena of all sorts, including the supreme one of Will, upon visible, tangible, material elements in the physical body and its

activities, there is now a growing consciousness of self-activity and freedom. Where there was a stern sense of evil remorselessly foisted on posterity, of dire heritages of the effects of vice and sickness, there is now recognition of the tendency in things to spontaneous improvement. The ruin of the first generation is balanced by possibilities of redemption and the disappearance of taint. Pessimism as a philosophy has not the vogue it had yesterday. In anthropology, we are reacting vigorously against the terrible doctrine of the Italian school, which sets up " the criminal man " as a kind of race or type *per se*, predestined to vice by their very form and features. We are learning to place the blame of criminality, for the most part, upon Society rather than Nature.

All these are examples of a general tendency of our time. We are dwelling on the value of the Will and its freedom, as a basis of character. We are tired of the dictum which seemed so refreshing to the past generation, " No thinking without phosphorus " (a most imperfect statement at best), and of its twin brother, " The brain secretes thought as the liver secretes bile." It is well to have been through these stages of thought, and to have learnt their lesson of the importance of food and the other physical bases of life. Having fully accepted and assimilated certain practical inferences from these points of view, we are now inclined to give more attention to the converse truth, and to examine the ways in which Mind rules Body.

We are, in fact, beginning to be prepared to see both sides of the problem; body and mind in a mutual subordination and dependence. In gymnastics, in physical training, we are learning to look on the nerve and the muscle as one compound organ, a mutual copartnership, filling the place of governors and employees of the other organs.

In education, the new advances are inspired by belief in the value of self-originated activity and self-government on the part of the pupils. The attitude of mental submission and passive acquirement is no longer the ideal. It begins to dawn on us that submissiveness to authority is a valueless trait, unless it be the fruit of a well balanced judgment and an independent will; and the confirmation got by reformative appeals to this side of the nature is amazing.

Even the so-called "parental relation," attractive as the phrase sounds, has in it of necessity the element of arbitrary force, and to some extent may place the authorities and pupils of reform-schools in a condition of mutual resistance.

In the words of Nicholas Murray Butler, "Spontaneity is the key-note of education in the United States." Self-development through self-government, of which the "George Junior Republic" at present offers the most notable type, is no longer an academic phrase, but a practical element in progressive pedagogy and reformatory work.

The attitude of parents toward children is less satisfactory. We still make them our dolls, and

enjoy them as we do bon-bons. Some sentimentalize over them; some snub them; many find them *de trop*, and few understand the principle of equality in treating them. And yet, of all reforms and enlightenments, those are the most promising which have to do with children. And if few men can be found who will sacrifice their own pleasure, there is satisfaction in knowing, among the few, those whose broad humanity and power of leadership shame the rest of us into enthusiasm.

Upon the grown man and woman is laid that hardest of tasks, to know themselves—to govern themselves. There are a certain few who sincerely attempt this; some, even, in the interest of their own mental health, and in the hope of avoiding threatened insanity. If I can find anything helpful to say to such, it will be very grateful to me.

And finally, we have as citizens, acting through the power of the State, powers not yet exercised, which have a reasonable promise of relieving to a large extent the burden of criminality, and to a very perceptible extent the scourge of insanity. I will not anticipate these conclusions, which form the closing chapter of this book.

CHAPTER II

THE NATURE OF MENTAL DERANGEMENT

> Mad let us grant him then : and now remains
> That we find out the cause of this effect ;
> Or rather say, the cause of this defect ;
> For this effect, defective, comes by cause.
>
> *Hamlet*, ii., 2.

THERE is something in the mental attitude of our day which makes it easier to discuss the problems before us than it was a hundred years ago. We have outlived the period of metaphysical analysis and classification — we have got beyond the notion of " mind disease," as something possibly originating in sinfulness, perhaps based on demoniac influence, but at all events originating in the spiritual part, and punishable by means suited to the correction of contumacy and evil-mindedness. We have come to see (or we begin to see) the inadequacy of those really materialistic views to which psychiatry has devoted itself for fifty years past, and are, with more or less of variancy, on the road to acknowledgment of the potency of mental influences. We have begun to feel that asylum-treatment is not the last word of science; and the notion that " a man 's a man for a' that," whether sane or insane, now

suggests to us many points in which we had systematically overlooked the very humanity of our sick brethren. We also begin to study insanity, not merely as philanthropists, but from the point of view of husbanding the State's resources and of extinguishing the evil by practical legislation. More general in its influence is the attitude taken by large numbers in regard to the connection of mind and body. The study of psychology with laboratory instruments and methods has linked thought and matter in a wondrously impressive way, and it may even be said that a kind of monism is popularly held — a view which clamps, if it does not weld together, the two entities once called Mind and Matter, and now unified under the inadequate designation of Mind.

Whatever may come of the latter tendency, it certainly needs to be broadened by practical study of education, criminology, and sociology, of the laws of human development and of degeneracy, of the physiology of the mind, and of disease in general. In so far as any new sect binds itself to one sole line of study, it fails to grasp the fact of the unity of all man's manifestations—which is the key to the problems before us.

As all the elements of the soil are brought to sight in the crops and fruits, so all the basal faculties of man are the feeders of his intellectual and moral life. His social relations *are* his morality; his exertions *are* his intellectual activities *in esse*. No minor generalization will take in the subject; we are studying nothing less than Man's Life.

A satisfactory *definition* of insanity, it is said, has never been given. The subject is in fact so broad that any attempt to cover it in all its bearings results either in obscurity or in extreme generalization. An infallible definition, however, is not what we need; for the present purpose it suffices to present the leading points of the conception clearly and in conformity with the ordinary usage of medicine, law, and social life.

Maudsley's definition includes the important fact that disturbance of the judgment or reason is not the one essential feature of this disorder, since it may involve either the region of *feeling*, or that of *ideation*, or that of *conduct*, or two, or all of these. He adds that it more or less incapacitates the individual for his due *social relations*. Mercier's concentrated definition,[1] "a defective psychic adjustment of the organism to its environment," suggests the same fact, and reminds us of the prevailing unsocial or selfish nature of insanity.

To include mental defect, or arrest of development, as in idiocy and feeble-mindedness, carries us beyond the popular conception of insanity; but we must logically make the inclusion. In fact, we can have no clear idea of the origin of insanity unless we include mental defects of all kinds in our view.

Among the points which legal logic has formerly insisted upon is the notion that the insane are strictly set apart from the sane by an inability to

[1] After Herbert Spencer.

judge of right and wrong. This is very misleading. In the case of irresistible impulse, there is often a clear perception of the wrong nature of the act, and even a horror of it. And again, a man may have good moral notions, but may be possessed with the delusion that some one is threatening his life, and may act in a desperate way under this belief.

Neither are the insane always irresponsible. In many cases they deserve credit for kind or honest acts and blame for malice and treachery, in the same sense in which the rest of us do. In asylums, the efficacy of certain distinctions and deprivations of privilege in aid of discipline, indicates that the insane are largely amenable to the same motives and controlled by the same methods as the sane. Mercier tells the story of a patient who, in the absence of ward tenders, used to vent his low, bullying propensities upon his helpless neighbors by giving them a black eye now and then. One day a small, quiet patient was introduced. The next morning our bully was found very badly knocked up; he had tried his usual trick on the new man, who happened to be a prize-fighter by trade, and who administered a dose which proved a permanent cure.

The inadequacy of all attempts at definition comes out clearly when we try to decide whether *anger* is a form of insanity or not; we leave the problem to the reader's decision.

The *systems of classification* under which the different forms of insanity are grouped are many and

various. This variation is in part a matter of individual taste, or point of view, and in part it expresses the imperfection of the theory of insanity. Without offering any complete system, I think it will be helpful here to notice some of the chief forms of disorder.

Mania and melancholia almost explain themselves. The former is a state of increased flow and display of bodily and mental performance; with excitement, and generally incoherence. The latter presents retarded and checked activities, mental and physical, with depression; the patient is sad, despondent, even crushed, dazed, or stupefied; or sometimes agitated in the midst of the depression.

These terms are sanctioned by the usage of antiquity. They form the corner-stone of most systematic classifications of insanity, and as they represent common and palpable phenomena, it is important to know them. But there is great probability that they do not represent distinct diseases, or "morbid entities," in the sense in which measles or rheumatism are distinct. They are, indeed, very often combined with or run into each other.

Dementia is a loss of mental power. It may follow an attack of acute mania or melancholia, or may come on independently. There is a special form called paralytic dementia, or paresis, which belongs chiefly to the latter half of life.

Hypochondria is a melancholic state in which the

sufferer is much occupied with personal sensations and false notions about the state of his body.

Paranoia (monomania) is a state in which certain fixed notions and opinions, based on delusion, engross and strongly control the mind and pervert the judgment.

One of the latest inductions, offered on the high authority of Kraepelin, affirms the existence of an important class of disease termed "manic-depressive insanity," a compound of mania and melancholia in alternation, often with intervals of sanity; under which designation it is found that a very considerable proportion of cases can be brought. If we accept this view, it leads us to the conception that the real disease is something underlying, which has escaped our analysis, while the effervescence of mania and the leaden grief of melancholia are but symptoms—parts of one and the same picture, like the cold and the hot stages of ague.

In dividing natural objects into classes, the naturalist has in view, at the first, convenience in naming them and the advantages which accrue from having some name, however arbitrary. Later in the development of a science comes the desire of a nomenclature which expresses the basal principles upon which the differences of species are founded. And so it is beginning to be with insanity. It is felt that present systems of classification are mostly based on external facts, upon leading symptoms which may or may not be essential and basal in their nature.

In addition to manic-depressive insanity (now widely recognized by specialists), Kraepelin has proposed some other rearrangements of groups, of which I will only briefly mention "dementia præcox," characterized by a tendency to sink into imbecility. The reader will understand, however, that the plan of this book does not permit the discussion of the correctness of this scheme. Kraepelin's merit consists in having seen that the old classifications were superficial — based on outward, often changeable, appearances rather than on essential similarity of nature. He initiated an effort, which is still being carried forward, to base the character of the disease upon all its symptoms, through its entire course, however long-continued. He has endeavored to set apart the curable from the incurable forms; those tending to recovery from those whose natural exit (*ausgang*) is in dementia. This admirable attempt is being paralleled by the advances in knowledge of the morbid anatomy of the brain and spinal cord, as bearing upon insanity, which have characterized the scientific history of the past ten years.

A useful and suggestive grouping of the forms of insanity may be made as follows. First, there are several classes which tend to dementia — the essentially degenerative forms of insanity; among which are found paresis and the dementia of old age, which display very marked anatomical lesions of nerve elements, besides other important forms the pathology of which is less distinctly made out. Second, there

are those disorders which do not specially tend to grave dementia, although chronic in their habit; including paranoia (monomania), and the insanity of the change of life. Third, the acute psychoses: simple melancholia, manic-depressive insanity, and confusional insanity, which tend to recovery, and may relapse.

To these necessarily imperfect and cursory remarks on classifying positive insanity, it will be well to add some description of certain affections and conditions which lie on the border line between morbidity and insanity. To the eye of the student of causes these states are only less fully developed products of the conditions producing madness, namely, a constitution more or less deteriorated or degenerate. The types of the class referred to are epilepsy, hysteria, certain morbid feelings and impulses, and congenital neurasthenia; in all of which the morbid essence is something innate, something wrong in the constitution of the sufferer.

There is the greatest possible range in the development of these diseased conditions. At one extreme we find the victims of impulsive insanity and epileptic insanity declared irresponsible by the law. At the other end, every one of us finds himself sometimes losing self-control under stress of toil and care. And between, there is what is called the "insane temperament," characteristic of many persons never known to have been actually in-

sane, and of many who do go mad—persons termed "cranks" by their afflicted neighbors, who often find it hard to decide on which side of the line they are. It is common enough to find such persons grouped in families, following the biological law of degeneracy.

One of the characteristic mental troubles which belong to this group of morbid constitutions is the haunting presence of a persistent idea, or the impulsion to dwell beyond all reason on certain trains of thought. Here also belongs the picturesque group of morbid fears, or "phobias"—unreasonable, uncontrollable, and therefore strictly insane exaggerations of the fears to which all are liable. Such are: the dread of crowds, of open places, of high places; dread of certain forms of sickness; dread of contact with dirt, actual or potential, and of possible contagion through such contact; dread of making erroneous statements, of appropriating others' goods, of saying unseemly things, of blushing; of pass examinations—in short, of all things imaginable, the most ordinary and the most bizarre.

Impulses to eccentric or criminal acts without motive need no special discussion here, beyond noting that they often make their appearance during adolescence, when they may be favorably influenced, if ever, by education.

Constitutional depression of spirits is admittedly a "morbid," that is, a diseased state, yet cannot be called insanity. Its victims as a class lack en-

durance and are easily fatigued, and suffer much from headache, loss of sleep, indigestion, and other nervous symptoms. Some by persevering accomplish good work, but as a rule the lack of courage, the feeling that something is "out" with them, an overstrained conscience, an absence of satisfaction in existence, are perpetual hindrances to success.

It is important to distinguish such cases from others in which very similar signs of mental depression and disturbance exist, but are due to chronic nervous exhaustion from overwork and other causes. In the latter the nervous symptoms disappear when the tension is removed. Sometimes it is relief from mere fatigue that is required; at other times a mental or emotional state must be delicately readjusted and a new motive or hope induced. The possibility of relief by rest, recreation, and removal of injurious agencies is characteristic of pure acquired neurasthenia. The constitutional form is not so relieved, and appears to offer small hope of cure, while there exists a possibility (doubtless a remote and very rare one) of a transition to fully developed insanity.

But it seems probable that the constitutional element is seldom entirely absent from neurasthenia, though the amount present may vary to any extent. The question of amount is of course important to the patient. As regards the development of insanity from neurasthenia by family descent, it is quite doubtful.

It was formerly assumed that all insanity rested on the basis of diseased states of the brain. The proof has never yet been rendered in its entirety. Pathological-anatomical changes have been made out in paresis, in senile dementia, alcoholism; probably in epilepsy and dementia præcox and climacteric insanity. This list leaves out a considerable part of the acknowledged field of insanity; but progress in covering the field is still making. There are many abnormal states of the brain cells detected by the microscope, but not so definitely as to enable us, from inspection of the brain, to decide upon the nature of the mental symptoms observed during life.

The veil is indeed over much of the field of view, and a correlation between the mental symptoms and the pathological anatomy is as yet largely to be made out. But the substantial, general relation between injury of brain and derangement of mind is a broad fact, and stares us in the face. That a bullet traversing the brain is the primary causal element in the subsequent mental disturbance of the wounded man; that the wasting and shrinking processes of age, affecting brain and muscle alike, or the poison generated by fevers, or the poison introduced in the form of alcohol or opium, act equally as causes, are propositions which it is unnecessary to defend.

There remains, however, the necessity of discriminating between cases of permanent injury to the tissues, and cases in which a seemingly complete recovery allows us to hope that the tissues have re-

turned to a state of health. The former are organic, the latter functional, diseases.

Granting that the diseased condition is entirely cured, without residual signs,—there is propriety, even then, in retaining the idea of physical disease, a morbid disturbance of physical states. A statement that the patient's frenzy or stupor or suspicion are phases of disorder of mental, affective, or motor processes, might have satisfied the predecessors of Pinel, but is not helpful to us, holding as we do the belief that mental disturbance and brain disturbance are inseparable facts, and divergent phases of one and the same event. And what idea may we rationally entertain of the physical side of such a process ?

It is a good and reasonable generalization from our knowledge to suppose that changes in the nutrition of the brain-elements, or " neurons," of varying degree and kind, form the basis of such mental disturbances. By nutritional disorder, we must understand not only that too much, too little, or chemically insufficient food-stuff is carried to the brain; but that, in addition to these derangements, the brain is sometimes poisoned by alcoholic and other foreign materials, or by the presence in the blood of effete substances which ought to be swept out through the kidneys, the lungs, or the skin. And we may also understand that the cell-tissue of the brain may become exhausted by over-stimulation until it ceases to appropriate nourishment from the blood; or that, through inherent want of vigor, it shows inaptitude in the rapid and complete assimi-

lation of new nutriment. If the idea is taken in this broad sense, we may fairly say that malnutrition of nerve-tissue lies at the basis of all mental disorder.

It is in an important sense true, that the man inherits from the boy. A continuity of life, of tissues, of habits, undeniably bridges over the passage from childhood to manhood. The cells actually composing a body are either the identical cells with which it was born, or newer cells directly formed from these and standing in a filial relation to them, so that the individual components of our bodies at any period are direct descendants of those with which we were born. The continuity of life, which is so plain when we study the budding plant-cell, becoming two where there was but one before, extends through our own organism and our own lifetime in like manner.

The processes of parentage and birth involve the same idea of cell giving rise to cell, that we have just stated in relation to ordinary life. The act of fecundation, or the union of two cells, representing two parents, is followed by manifold subdivision into new cells in continuity of life. As Clouston puts it, " Heredity is best understood as continuity of cell-life."

Potencies which we cannot see inhere in the cells, and are transferred in connection with them; from parent animal to its offspring, and from mother cell to its daughter cell. We study the cell by the eye;

we study its potencies by observing health, disease, and "human nature," partly in the minute, but mostly in the gross.

The natural history of disease may be invoked as furnishing illustrations of this transmission of impressions, either occurring within the lifetime of an individual, or involving a parent and its offspring.

Diseases differ widely in this respect. Some (as typhoid fever or grippe) are so independent that a first attack does not involve any prospect of a second. Others (as rheumatism, gout, epilepsy) seem often to imprint a stamp upon the organism, so that the first attack leaves one distinctly more liable to have subsequent attacks. And the constitutional impression is transmissible, under limitations, to offspring. Insanity belongs to the second class; in most cases one is more liable to a recurrence of the disorder after a first attack. Fortunately, this is not true in all cases, especially in the young and vigorous.

The true cause of the disease is the original cause; hence heredity is not strictly a cause, but a means of transmitting insanity. Heredity is a character, a trait, of the disorder.

Let me illustrate this statement a little further, to prevent misunderstanding. It is right to say, as we commonly do, "A is insane because his father was; he inherits it." Test the matter in the negative form; it is a principle of logic that removal of cause will remove the effect, and so we may say that "if A's father, or his progenitors, had not been drunk-

ards, A would not have been the nervous wreck that he is." In such a sense inheritance is a cause of many cases of insanity. But if by *cause* we mean *origin*, then we cannot be satisfied with "heredity" alone. Both views are important. It is important to trace a train of consequences; it is at least equally so to ascertain the original fact which first set the consequences in motion. In a certain point of view, it is more useful to know the first cause. The time for prevention is before the first cause has rooted itself in a man's nature. And again, a first cause may be simple, while inherited effects are strangely varied. Still again, it is of the utmost importance to remember that the causes are not wholly wrapt in the mystery which "heredity" suggests; for there are thousands of cases occurring every year which spring up, as it were, in fresh soil, in untainted families, under the influence of new and obvious causes. The total number of the insane would rapidly diminish under the process of natural extinction, if it were not that fresh contingents are constantly added from those whose power of resistance proves too weak to stand the many stresses of life and the many poisons which civilized existence infects us with.

The inheritance of disease is no greater mystery than that of health. The normal child is born with a life destiny, an endowment of capacities and latent tendencies which will make him at first a feeder and grower, next a sexual being, to culminate at a given age, and then to decline in age with a series of in-

volutions as wonderful as those we call development. The child of unsound parentage may be beautiful and strong till his twentieth or his fortieth year, carrying all the while a perfectly concealed tendency; at a given time he has gout or insanity, or some other predestined affliction. It reminds one of a mine set to go off with a time-fuse.

It will be seen from this that we are not to suppose that insanity or gout *per se* is inherited. What we inherit is rather a susceptibility or a *tendency* to these disorders—not the disorders themselves. We are given a body which, if things take their natural course, is likely to give rise to these troubles. Who shall tell us in advance? The mine is there; can we not find the fuse and cut it? Can we do nothing to arrest tendencies? The question is of momentous importance, and is felt as such, with painful weight, by some of us. A partially affirmative answer will be given in some of the later chapters of this book, with a consideration of the methods of education and living appropriate to such prevention.

One of our most prominent specialists in insanity,[1] and, I venture to add, one of the fairest-minded, has expressed himself to me in conversation to the effect that the *fatal necessity* of insane entailment has been greatly exaggerated, and forms a great popular error. What is inherited is tendency.

I know of persons [he said] of tuberculous inheritance, who have escaped by correct living though other members of the family have died of it. Tubercle is one of

[1] Dr. Hurd, Superintendent Johns Hopkins Hospital.

the very strong predispositions; we can escape it; and if so, I see no reason why we cannot escape the insane predisposition by a similar life of precaution. In some forms of insanity the ability to prevent a second attack lies greatly in the power of the patient.

There is no doubt that erroneous, and in part exaggerated, views prevail in regard to the heredity of insanity. A great many persons find it easiest to ignore the whole matter of heredity, to deny or extenuate its occurrence in their own families, and to promote or contract marriages in most unpromising cases or even to cause the marriage of an actually insane person. There are others, not a few, who allow themselves to be influenced by an ignorant dread of the unknown, without asking for the counsel of those who are better informed. I venture to present a few points in illustration of what I conceive to be the true ground to hold.

1. A great many cases of insanity are, as far as very careful examination shows, "without heredity." The number in which insanity in near relatives can be shown to exist is rather surprisingly small—probably amounting to a fifth or a quarter of all cases; and if we double this to allow for imperfect data, we still have remaining a great number of cases in which insanity is probably original with the patient. When a careful tracing of family history shows a clean record, one is inclined to speak much more favorably of the chances of a patient as regards recovery, and more especially in reference to the chances of non-return of the malady.

2. There are not a few cases in which *young* persons of good constitution have been attacked with so-called "acute" forms of insanity, from which they have entirely recovered after a few months, and have remained thereafter, during a long life, free from any symptoms of a return of the malady, and free from signs of permanent or chronic mental injury.

3. The prospects of such a convalescent for escaping a second attack must depend a good deal on the answers given to such questions as the following: First, what is the species of insanity? for certain forms are much more curable (in a permanent sense) than others. Second, is there personal freedom from neurotic tendency? Third, can we point to an existent cause, like mental stress, shock, or sickness, which is evidently powerful enough to account for the attack of insanity, independent of heredity? For if we can show the gravity of the assault from without, we are the less inclined to believe that the man fell from intrinsic weakness of constitution. Fourth, is there freedom from family taint of insanity?[1] Fifth, if a relative is known to have been attacked, can we find an adequate external cause in the case of such relative? for, as above, under Question 3, such a fact pleads in favor of the absence of hereditary taint, and makes the case more promising for both parties.

[1] Krafft-Ebing states that family predisposition makes the individual more liable to attack, but lessens the probability of a severe attack.

4. The multiplication of cases of insanity in the patient's family group is a very serious matter.

5. The production of insanity, feeble-mindedness, or other defects, by the intermarriage of near blood relatives is a subject of great popular misunderstanding. There is nothing in such marriages, between sound parties with good family history, to cause degeneration. Following the indication given in paragraph 7, we must give a broader meaning to the word "soundness" than simple exemption from obvious psychic disorders; we must include most of the great "constitutional disorders." When an undesirable tendency exists in the family, it is obviously liable to be found in the constitution of both the parties, and if so, the tendency is likely to be fixed or strengthened.—The evidence from statistics, on the large scale, does not convincingly show a marked tendency towards mental defect in the children of such marriages. In pure, healthy stocks, in secluded regions, very frequent marriages of relatives have been known to occur for many generations without deteriorating the breed of man.[1]

[1] Compare statements by Shuttleworth and Beach, in *Dictionary of Psychological Medicine*, vol. i., p. 662, on effects of consanguineous marriage; also, an analysis of recent views given in E. S. Talbot's *Degeneracy, its Causes, Signs, and Results*, pp. 82–87; also, a summary by Ireland, in *Mental Affections of Children*, 1898, p. 16.

A great diversity of opinion has been expressed upon this point. Many of the earlier statements appear to have been based on the fallacious method of collecting the unfavorable cases, and disregarding others. The statement in the text is meant to imply the verdict, "Not proven," as far as present evidence goes.

6. The propriety of a given marriage is often called in question. A person may have reason to doubt the advisability of the step in his own case, or in that of a ward. It is out of the question to lay down rules for the decision of such cases in a popular book: the advice here given is to lay the matter before competent and fair-minded medical authority.

7. Direct, identical inheritance of a given form of insanity from ancestor to descendant is quite a rare occurrence. It certainly does occur. But for the most part, insanity must be considered as forming only one of a large group of constitutional, more or less neurotic disorders, which have a general tendency to cause degeneration of tissue. One of the most remarkable of modern discoveries is the fact of the *interchangeable* nature of these disorders in inheritance; a fact in regard to which we shall have more to say in the next chapter, in connection with the study of degeneracy.

8. The tendency or susceptibility to insanity (which is all that is inherited) may be described as consisting in an unusual *instability* of the nerve-tissue; a want of power of resistance to the assaults of the manifold causes of insanity. The power possessed by the skilful educator, in steadying and strengthening such deficiencies, is very great.

9. It is by no means necessary to suppose that all of this instability is congenital, or derived from a parental defect. On the contrary, a large number of cases doubtless originate in persons of good average quality, under the pressure of mental shock, or

anxiety, or as a sequel of the acute fevers, or from poisonous agents. In some cases the attack is sudden, but it is characteristic, on the whole, of these cases, that the power of resistance is not broken down all at once, and the disease comes on by degrees.

The following extract, from a well-known pen,[1] represents a point of view from which legitimate encouragement may be drawn:

When one or two of several brothers or sisters of an individual are already afflicted with insanity . . . the members of the family who still remain sane are subjected to a very definite stress of considerable intensity. The fear of following in the footsteps of their relatives, and of themselves becoming insane, is so urgent, and is attended by so great a stress, as sometimes of itself to bring about the very disaster which is dreaded. It would, of course, be untruthful to deny that persons so related are exposed to greater chances of becoming insane—are more obnoxious to the influence of stresses tending to produce insanity—than are the majority of other people; but, on the other hand, it is the height of folly to suppose that, because a person has one or more brothers or sisters who are insane, therefore that person stands in imminent or urgent danger of himself becoming insane. The operation of the laws of heredity secure that the tendency of each individual to develop in the direction, in the manner, and to the extent of the average individual of the race from whence he springs, is so power-

[1] Charles Arthur Mercier, M.D., *Sanity and Insanity*, pp. 272, 273.

ful, that it will assert itself against conditions the most unfavorable; so that parents who differ very widely from the usual standard of the race commonly produce children who approximate to that standard very closely; and even if they produce one, or two, or more children who inherit their particular divergence from this standard, the chances are quite as great that the remaining children will follow the usual course of development, and grow into normal average individuals, as that they will follow the development of their parents, and inherit their instability. If persons situated in the way supposed, that is, related to insane brothers and sisters, and on that account worrying about their own sanity, were aware of the immense number of perfectly normal people who are in the same predicament as themselves, they would find their fears considerably allayed.

CHAPTER III

DEGENERACY

It is the greatest part of our felicity to be well born.
Anatomy of Melancholy.

IN the last chapter, a discussion of the nature of insanity naturally led to the thought of its causation. The immediate cause, we found, might be summed up under the head of perverted nutrition of brain. Pushing back the inquiry another step, we encountered the usual statement, that heredity is a common cause; but that statement we saw reason to reject as unphilosophical, inasmuch as it fails to account for the origin of the first case in a series. The true essence of morbid heredity we found to exist in a combination of two facts: first, continuity of cell-life and of the qualities and potencies therewith associated; second, that depression of vital force known as Degeneration, which manifests itself in the production of a numerous brood of ill-featured disorders, one of which is insanity. The present chapter will be largely taken up with considerations upon Degeneracy.

The word degeneration can be used in two senses. It may imply a descent, a retrograde move in the scale of being, as when the number of teeth dimin-

ishes, or the legs of a quadruped shrink to the whale's flippers, or the parasitic barnacle loses his organ of locomotion. These are cases in which adaptation to environment is a main factor, and the health of the individual is promoted in new circumstances. But degeneration means something very different when applied to the noxious influence of evil living, or nervous strain, or deprivation of sunlight, or starvation, upon the vital forces of an organism. Such influences produce a condition of exhaustion, of a general character, which cannot but affect the ovum through impaired nutrition. Loss of vigor in parent implies loss of vigor in offspring. Such loss manifests itself in two ways—by deficient or misdirected growth (deformed or excessive or defective body), and by a great variety of tendencies to diseased action, too numerous to be named here, including the tendency to insanity.

The modern student of heredity cannot fail to be confronted with the recent doctrine of Weismann, who denies the possibility of the inheritance of acquired traits. If I do not mistake his position, he intends to deal with normal organisms. Cases which depend on defect of constitutional vigor would doubtless not be claimed as coming under his prohibition. That a man of originally sound health could "acquire the trait" of chronic drunkenness, with immunity as respects the mental health of his children, would not probably be claimed; or if the claim were made, it might safely be disregarded. The whole question seems to me to lie outside of

the Weismann theories. The impairment of vigor may take the form of a faulty bio-chemical habit of the tissue, acquisition of vulnerability in any tissue (the nervous tissue included), defect in quantitative power of assimilation of food, in circulation, in energy of brain-tissue in general.

Whatever view we may hold as to the essential nature of insanity, we cannot avoid the admission that its occurrence is largely a matter of individual susceptibility. In identical circumstances, some men will become insane while others do not. The liability to become deranged is ascribed to want of resisting power, or, to use an expression which has become quite established among alienists, "nervous or mental instability."

There are all degrees of instability. Some persons may be so firmly built that no conceivable griefs or tortures would shake their reason. This is, perhaps, rather a matter of speculation; but we do know that some withstand an inconceivable stress, while others succumb to shocks or influences so slight that they escape notice. And there is really no dividing line—it is all a question of degree—most persons have in them the possibility of yielding in conceivable circumstances. The contagious disorders of the mind show this well. Men in a mob lose their heads in a frenzy of anger. An army in battle may be steadily fighting, and in a moment some unexplained event deprives them of judgment and courage, and sweeps them in panic off the field. The dancing manias of the Middle Ages, and the

"jerks" of our rustic camp-meetings, are similar phenomena, wherein whole masses of population were swept into one common frenzy. That a roomful of girls may go off into hysterics in imitation of a single victim, is a familiar fact.

This susceptibility to temporary mental derangement is almost universal. The susceptibility to the graver disturbances called insanity is rather general. I believe that with suitable appliances one might safely contract to manufacture it on a wholesale basis, as the criminal condition is manufactured by the wholesale in "slum" life. But in insanity, as in crime, there is a class whose susceptibility to injurious impressions is greatly heightened by inborn defects. These are the victims of degeneracy. Life's trials sift them out, and they are consigned to asylums; but others, who have succeeded in escaping downfall, remain in society; though their posterity may be making ready to fill up the list of "inmates" by and by, or by good hap to be rescued by wise education.

As a generalized expression of the origin of insanity, idiocy, and the allied states, degeneracy is of the utmost importance. It would be going too far, doubtless, to say that it explains all of acute insanity; but as an hypothesis it explains and unifies so much that it deserves full attention and testing.

The following definition is borrowed from Näcke[1]:

[1] G. Näcke, "Degeneration, Degenerationszeichen und Atavismus," *Archiv f. Kriminalanthropologie u. Kriminalstatistik*, Bd. 2, H. 3; quoted in *Amer. Journal of Sociology*, vol. v., No. 1, p. 128.

Degeneracy is characterized by a marked slowing of the vital activities, together with a lessened power of resistance to noxious influences of any kind. There is an increasing tendency of the whole organism towards physical and psychical infirmity. We have to do with a morbid state of affairs which may arise through diseased conditions in the germ from which the organism takes its rise, or through nutritional disturbances *in utero*, or during the first years after birth. It is through having this pathologic background upon the one hand and through the presence of this lowered vitality upon the other that degeneration is to be distinguished from simple abnormality, which does not itself imply a proneness of the organism to physical and psychical disease. Degeneration may readily pass over into actual disease, but when it has so done, the disease is not to be called degeneration. Usually the reduction of the vital activities is accompanied by the presence of certain anomalies,—the so-called signs of degeneration or stigmata. These are occasional variations only, and those of the morphologic kind are of little or no functional importance; they appear more frequently than do other variations upon those persons to whom for other reasons we apply the term "degenerates."

Before giving details of the defects of organization which are classed as degenerations, it will be well to note the existence of a group of neuro-mental diseases which are evidently closely related, and which share the signs of degeneracy to a large extent in common.

Insanity, idiocy, epilepsy, hysteria, and to a fractional extent crime, are close kindred. They form

the leading members of a company which are characterized by heredity, not merely direct, but interchangeable, and the bodily signs of defect, of which we shall speak later, are shared by them in common to a remarkable extent.

With these are associated a large number of affections of a nervous character, and certain which are not commonly so regarded. Exophthalmic goitre is often associated with mental disease, hysteria, or epilepsy in the same person; and is found in the same family with many other affections, as chorea, paralysis agitans, angina pectoris. Chorea has a wide range of affinities. Neuralgia, migraine, and neurasthenia have very strong claims to be considered allied to insanity or epilepsy.

The association of so large a number of disorders prepares us for comprehending the doctrine which is announced under the name of dissimilar or transformed heredity.

It is the power which this class of disease has of changing its form in heredity that stamps it as alien to the normal laws of development, and throws it all under the one category of degeneration, whose tendency is not to the production of new forms of life, or new organic activities, but to the destruction of the individual or the family in which it appears.

Féré,[1] who has brought these considerations very prominently to light, makes the general statement that

whatever be the origin of a degenerate person, whether

[1] *La famille névropathique*, 1894, p. 308.

he be the son of a criminal or an insane person, or of an epileptic, or a victim of ataxia, alcohol, or lead, the stigmata which he bears cannot serve to distinguish him from another degenerate of different origin. All the stigmata are common to all categories of degenerates, and when we discover a new stigma, we find at the same time that it is not special to a group: it is because of this circumstance that the efforts which have been made to establish a criminal type have proved vain.

There is a general agreement in regard to the principal stigmata. Good descriptions are found in Talbot,[1] Peterson,[2] and Féré,[3] not to speak of the extended works of Lombroso [4] and his school.

The physical signs called stigmata comprise, first, a large number of irregularities of the bony skeleton, showing inequality, excess, or deficiency of growth during the period of development. There are also many failures of development in the soft parts.

Asymmetry, or inequality of the two sides of the body, is almost universal in the human race. An excessive degree of inequality, however, is held to be significant of abnormality. Examples are found in the one-sided face and head, and the very short limb on one side.

Excessive size of the cranium; its minute size

[1] *Degeneracy: Its Causes, Signs, and Results*, "Contemporary Science Series," 1899.

[2] *Nervous and Mental Diseases*, 1899.

[3] *Loc. cit.*, chap. xvii.

[4] *Criminal Man*.

(microcephaly); the boat and pyramid shapes; over-development of the lower jaw, or protrusion (prognathism), are often noted in the degenerate.

Defects of the hard palate and the teeth (especially the latter) are considered among the most typical marks of degeneracy. A vaulted and misshapen palate, misplaced teeth, badly shaped teeth, and the absence of a part of them, form striking evidences of failure in evolution.

Other bone defects are found in the spinal column (*e. g.*, spina bifida), and in the deformed chest or pelvis. The hand may have an extra finger, or the fingers may be out of proportion in length, or may have the wrong number of bones. There are also dwarfishness, giantism, and infantilism or failure to develop adult features.

In the defects of the soft parts, we have, first, peculiarities of the ear, in various ways. It may lie flat against the head or protrude sharply. The lobe may adhere. Any part may be wanting or misshapen. Darwin's tubercle is found on the edge of the upper back part, and is thought to be an atavism, analogous to the pointed ear found in animals. Much importance is attached, probably with justice, to anomalies of the ear.

Defects of structure in the eye are numerous. Not only are far-sight, near-sight, and astigmatism counted as degeneracies, thus bringing in the greater part of civilized man under this head, but deformed lids, defectively formed pupils, irregularly tinted iris, albinism, and pigmentary retinitis bear witness

to failure of complete development. The arched fold of skin over the inner angle of the eye is abnormal.

Imperfect closure of the soft parts occurs in hare-lip and some genital defects; supernumerary organs, absence of organs, clubfoot, hernia, should also be mentioned here.

The presence of feminine outlines or type in males, or a big angular frame and a beard in women, are also stigmata.

Arrested or ill-regulated development runs through the whole series. Its general effect [1] is to cause ugliness of body and unloveliness of mind, which is common enough in a lesser degree as developmental in young women of neurotic heredity. Coarse skin, bad expression, deformed and ugly person, inharmony of movements—there are scores of young women who from the age of thirteen steadily get less attractive in mind and body; in such cases hereditary neurosis is usually found on careful inquiry.

The idiot is the type in which we may expect to find defects of development in greatest abundance; his condition is essentially due to abnormal and arrested development. Among imbeciles we find large numbers of persons who if left to themselves would not have sense to avoid crime; we also find many so-called moral imbeciles, who, with fair intelligence, seem to have little appreciation of moral motives,—affection, justice, generosity, compassion,

[1] Clouston, *Neuroses of Development.*

honesty,—and a more or less considerable number of these shade off into the class of habitual criminals.

A truth of deep importance is contained in the teachings of the Italian school of anthropologists.[1] But the claim made by them, that a criminal future may be predicted on the discovery of certain stigmata on a man's person, is an instance of the exaggeration in which they have indulged. Statistical inquiries upon criminals have been carried by them to a great extent. The following table from Lombroso[2] embodies some of his most general conclusions:

SIGNS OF DEGENERATION.

	WITH FIVE OR MORE	WITH THREE OR MORE	WITH NONE, ONE, OR TWO
	Per cent.	Per cent.	Per cent.
Normal	4	24	72
Delinquents	27.4	33.5	39.4
Epileptics	29	55	16
Insane	25.3	55.2	18.4

The value of these figures, to my mind, lies in the fact that they point clearly to a tendency. It does not greatly matter whether they exaggerate that tendency—they serve to call up to our mind the existence of a distinct class of the degenerate among

[1] A convenient synoptic statement of views held by different writers in criminal anthropology is given in MacDonald's *Abnormal Man*, which forms Circular of Information No. 4, 1893, of the U. S. Bureau of Education.

[2] "Criminal Anthropology," in vol. xii. of *Twentieth Century Practice*, p. 381.

our criminal population. I am very far from believing that the delinquent class in America ranks with epileptics and the insane as regards bodily degeneracy; but in that class there is a sub-class of degenerates.

If we except serious deformities of the cranium, there is no one of these stigmata which is of itself sufficient to excite distrust of a man's character or his future. The best and brightest, the most amiable, healthy, and sensible, may have one or two queer features of this class. They signify a moment or period in the history of the person's development at which failure occurred in one direction. A good many such failures occurring in one individual raise a presumption of defect of some sort in his mental or moral make-up, and the presumption is often justified.

Näcke expresses the point of view very fairly, as follows:

> These marks are of importance only where they appear in considerable number and are developed to a high degree, and even then their precise value is problematical. They furnish an indication of the probable inferiority of the bearer; the larger their number and the more advanced their development, the more pronounced may be the statements concerning the degeneracy they indicate. . . . Instances are not unknown where we have a high degree of degeneracy present with few or none of the stigmata appearing, or many apparent stigmata with little or no real degeneracy. Although signs of degeneration are undoubtedly more numerous and more

pronounced among the criminal and insane than among normal individuals, thus giving room for the supposition that there is some intimate connection between criminality and insanity on the one hand and degeneracy upon the other, it is nevertheless true that in concrete cases the process of inferring from the presence of stigmata the existence of a criminal or of an insane person is something to be undertaken with extreme circumspection.

The "psychic stigmata" of degeneracy do not require enumeration here. The expression comprises, in fact, practically all constitutional diseases of the mind, nerves, or morals.

The connection between degeneracy and a criminal life has been made much of by the Italian school; but among those acquainted with the unfortunate and the criminal classes in America it is safe to say that different views are entertained. A knowledge of city ways and of reformatory life leads to the conviction that most of our criminals are made, rather than born—made by neglect and bad example.[1]

The New York State Reformatory at Elmira represents one of the most original, judicious, and successful efforts yet made in our country for the reforming of young adult criminals. The ages of those received are from eighteen to thirty, and the crimes are not boyish errors, but substantially of the grade of felonies; it is with bad, though not confirmed, criminals that they have to do. Mr. Brockway, the late Superintendent, expresses his estimate of their antecedents and qualities as follows[2]:

[1] See Appendix.

[2] Eighteenth *Year-Book*, 1893.

Sixty-eight per cent. were on admission practically illiterate; seventy-five per cent. were without regular and remunerative occupation; ninety-two per cent. were reared without the restraints and benefits of good home surroundings; seventy-five per cent. were below the average of their class as to susceptibility to ordinary motives; and the same ratio not sensitive [to moral motives].

Nine tenths of these young men came up amid neglect, truancy, and bad home influences. "The slum" is responsible for a large part of their viciousness. The evil effects of street life upon children have been made familiar to most of us by such studies as Jacob Riis's *Ten Years' War with the Slum*, and Josiah Flynt's *Tramping with Tramps*, and need not be dilated upon here. It is very seldom that a real mechanic is found in prison. The lack of training has so impressed Mr. Brockway that he remarks that "industrial inefficiency is at the root of the criminous character, and their reformation is, largely, the problem of their industrial training and placing in industry."

The following observations from *Tramping with Tramps* are worth quoting. Be it remarked that a pretty large number of criminals mingle freely with tramps.

The majority of those criminals that I am acquainted with, particularly those under thirty years of age, if well dressed, could pass muster in almost any class of society; and I doubt very much whether an uninitiated observer

would be able to pick them out for what they are. After thirty years of age, and sometimes even younger, they do acquire a peculiar look; but, instead of calling it a criminal look, in the sense that the instinctive offender is criminal, I should describe it as that of a long resident in the penitentiary. Prison life, if taken in large doses and often enough, will give the most moral men in the world prison features; and it is no wonder that men who make a business of crime and are so much in prison possess them. Even men who are busied in the detection of crime have more or less similar facial characteristics. . . . When he nears his thirtieth year his strength and vigor begin to fail him. By that time he has served a number of years in prison, and it is this existence that drags him down. . . . Criminologists who believe in the innate nervous weakness of the criminal would do well to test their own nerves during even voluntary residence in prison-cells in order to estimate their power to disturb a natural equilibrium.

The number of insane, however, among criminals is large. In the English convict establishments [1] in 1873 thirty male convicts per thousand were found suffering from weak-mindedness, insanity, or epilepsy (three or four times the normal rate), 109 from scrofula and chronic diseases of the lungs and heart, and 231 had congenital or acquired deformities and defects.

In the further study of the causes of insanity we encounter a great variety of occurrences, circum-

[1] W. Douglas Morrison, Introduction to Lombroso and Ferrero's *Female Offenders*.

stances, and diseases. Among the more important of these we may mention: mental stress, anxiety, and shock; the stress of child-bearing and nursing; the climacteric changes of life; syphilis; febrile diseases; tubercle, gout, and rheumatism[1]; metallic poisons, and more especially the poisons of intoxication—alcohol, opium, cocaine, and others. In regard to many of these it may properly be said that they produce a degenerate condition within the lifetime of the victim, who is truly, as far as concerns his insanity, a self-made man.

This is true, I think, to a large extent in regard to the effects of alcohol. Drunkenness is a true cause of some insanity. A brutal love of intoxication for its own sake exists among some savage races and some members of our own race; but in studying the means of prevention, social misery must be considered a most important cause of drunkenness.

Whoever undertakes to reform the drink habit must aim at its causes. If drink causes poverty, it is equally true that poverty causes drinking. Poor food, hunger, badly cooked food, excessive tea-drinking, lead to the use of a good deal of alcoholic stimulant.

A workingman's table set with soggy bread, meat fried hard in fat, coffee indistinguishable from dirty water; where the average time taken for a dinner was

[1] The relation which gout, rheumatism, tuberculosis, syphilis, and other degenerative conditions bear to nervous disease and insanity is briefly and well discussed in chap. i. of *Mental Affections: An Introduction to the Study of Insanity*, by John Macpherson, M.D. (1899).

seven minutes, and the women sat with knife in one hand and teacup in the other, "alternately shovelling and swigging"; where nobody ate for the pleasure of it, but only because they were empty,—

such was the description of the boarding tables in one of our New England towns twenty years ago, given me by a friend from his own experience of factory life. Most of these men drank beer or spirits.

Cooking is the only kind of temperance preaching that counts for anything in a school course. . . . Five years ago a minister of justice declared in the Belgian Chamber that the nation was reverting to a new form of barbarism, which he described by the term "alcoholic barbarism," and pointed out as its first cause the "insufficiency of the food procurable by the working classes." He referred to the quality, not the quantity. The United States experts, who lately made a study of the living habits of the poor in New York, spoke of it as a common observation that "a not inconsiderable amount of the prevalent intemperance can be traced to poor food and unattractive home tables." [1]

There is a great temptation, in dealing with causes, to mistake the true relation of events. The craving for liquor often precedes an outbreak of insanity, and excess of sexual impulse is another frequent precedent condition; but in a large number of cases these excesses are the premonitory symptoms

[1] Jacob A. Riis, *A Ten Years' War: An Account of the Battle with the Slum in New York*, 1900, p. 225.

rather than the true cause, and both may be the expression of an hereditary infliction.

Echeverria[1] remarks that a tendency to drink may immediately precede and form the precursor, rather than the cause, of epilepsy, insanity, hysteria, neuralgia, or paralysis. In such cases the uncontrolled passion or craving for drink is, as also often happens with masturbation, merely the sign of the outbreak of an inherited predisposition to insanity or epilepsy, or of the early stages in the evolution of either of these maladies from accidental causes.

The same writer points out that the tendency to drinking is one of those metamorphoses of heredity which often occur in the transmission of mental and nervous diseases to offspring, without necessarily implying the existence of alcoholism in the parental stock. And conversely, describing the intimate connection which exists between epilepsy and drinking, he shows that parental intemperance often originates a tendency to epilepsy in the offspring, probably eighteen per cent. of the cases of epilepsy arising from this cause, unconnected with insanity or nervous disease. Viewed in a proper light, both conditions are allied manifestations of one single inherited neurotic predisposition, and successively reacting on each other. Neurotic heredity contributes to a larger extent than even vice and misery to the wide spread of drinking habits.

Then there is also the case of drunkenness which

[1] "Alcoholic Epilepsy," *Jour. Mental Science*, January, 1881.

follows injuries to the head and expresses the derangement caused by the injury.

In asylums for the insane [writes Maudsley] will be found many cases of insanity that have been complicated with alcoholism, particularly a peculiar form called traumatic insanity, the result of head injuries, after the receipt of which there is a remarkable tendency to drink to excess; and the alcoholism may be combined with the traumatic insanity in every conceivable degree, sometimes outrunning the original psychosis in its influence for evil.

Tuke calculates that the cases caused by intemperance, in the asylums of England, number twelve per cent. of the whole.

There are certain persons who, as is commonly said, do not "bear well" an ordinary quantity of an alcoholic beverage. Their reaction is abnormal; a slight alcoholic excess produces in them a condition which presents the appearance of insanity. Flechsig observes that this abnormal sensitiveness is apt to be coincident with the inheritance of mental or nervous disease, or with stigmata of degeneration, or with symptoms of nervous disease, as hysteria, epilepsy, and many others; or it may appear subsequent to a concussion of the brain, or typhoid fever, or the long-continued use of alcohol, morphia, or other narcotics.

It is doubtless true that with not a few persons the fact of addiction to drink or opium is only the natural outcome of a character which is so far de-

generate as to be unable to pursue any steady course of activity, and is only satisfied with the excitement of sense or emotion; such persons may give up drink only to adopt opium, or gambling, or horse-racing.

The effects of opium are seen in deterioration of the moral character, and not infrequently (as with alcohol) in insanity. Cocain is a recent and much popularized remedy (*e. g.*, as an ingredient in catarrh snuff), and possesses powers of wrecking a man's existence more terrible than any other drug.

The uses of this book will be sufficiently served without discussion of the insanities caused by other poisons. Something, however, should be said of the influence of the " diatheses " or constitutional tendencies known as the tuberculous, gouty, and rheumatic. The connection of the disorders of these classes with mental and nervous disease may not be obvious at the first view, but there is very strong reason for linking them with the more markedly and obviously neurotic disorders as part of one chain of causes and effect. Copious illustrations of these mutual relations are offered by Féré in the book already quoted from. We may add that, in the view of this writer, " arthritism " and the neuropathic diathesis are two kindred states, proceeding from one disorder of nutrition differently specialized, so that neuropathy, scrofula, tuberculosis, rickets, asthma, arthritism, etc., are found variously combined in families, and in certain conditions their manifestations are interchanged or mutually excite one another.

The way in which many morbid conditions may be grouped together as factors of bad heredity and degeneracy is practically shown in the statistics of epilepsy. By way of example, the last report of Craig Colony, when analyzed, gives us the following data : Of the 157 patients received during the year, no satisfactory information could be obtained in 39 cases; of the remainder, all but 9 had bad heredity. These are set down side by side with results of an inquiry into one hundred feeble-minded patients at Media, as follows — the figures for the latter being placed after those for epilepsy:

		PATIENTS
Epilepsy	in family of	36, 13
Insanity	" " "	21, 10
Feeble-mindedness	" " "	0, 18
Inebriety	" " "	36, 38
Neurotic affections [hysteria, chorea, etc.]	" " "	32, 35
Headache	" " "	24
Apoplexy, paralysis, and other grave nervous lesions	" " "	16, 6
Suicide	" " "	2
Tuberculosis	" " "	38, 56
Cancer	" " "	8, 6
Rheumatism	" " "	32
Syphilis	" " "	4, 2

In examining a published list of supposed causes, such as is to be found in modern asylum reports, one is struck with the fact that they cannot all be causes in the same sense. " Inheritance," " alcoholism," " injury to the head," " fright," act in four distinct ways, viz., by predisposing to an attack, by poisoning the brain cells, by gross destruction or

inflammation of the tissue, and by what we may call purely mental processes.

In the study of causes one naturally asks whether official statistical data are not attainable, and, if so, whether they ought not to form the unassailable basis of our statements. The answer is, unfortunately, to a large extent in the negative. Great masses of statistics exist, from which we may indeed learn something, but which are nearly worthless as furnishing solid ground for the study of causation.

One of the chief difficulties with hospital statistics is the want of a common ground of knowledge and theory on the part of those who mainly collect the data—the practising physicians who sign the certificates of admission and who fill out the question-blanks for the asylum records. There is a great lack of comprehension of the theory among physicians in general, and by consequence there is little general ability to put questions and investigate facts in the philosophic spirit which a new and difficult subject demands. For the subject is a new one still; new classifications and new theories are coming up for trial; while the whole subject of causation is profoundly influenced by recent scientific studies of degeneration, which have not been accessible to the average man until within a very few years.

As an instance of the way statistics are made, I cite one of the best and best-known of our American asylums. It published in 1899 a table of "supposed causes" of insanity in 11,379 cases. The classification is alphabetical, and gives rise

to some curious questions. Why is "apoplexy" separated from "cerebral hemorrhage"? Why are six distinct headings made of worry, mental anxiety, grief, disappointment, domestic trouble, business cares and perplexities? What is the value of recording "ill-health" as distinct from "ill-health from overwork, exposure, and loss of sleep"? Why, among nearly 12,000 cases, is the causation "unknown" in one third? Why, in that vast number, is it recorded that only 101 suffered from "heredity," only 20 from "congenital defect," and only ONE from "organic disease of the brain"?

None are better aware than those directly concerned in the gathering of such statistics, of the intrinsic difficulty of the subject and of the difficulties that are thrown in the way of inquiry.[1]

The statistics for England and Wales,[2] based on the assigned causes of all cases admitted, 1888–92, give 17.3 per cent. under the head of "cause unknown." The existence of so serious a vacancy would seem to show a defect, either in thoroughness of inquiry or in our comprehension of the subject of

[1] "I have never attached any importance to any table of this character [*i. e.*, of assigned causes] that I have seen published. It is usual to enter in the case-book the 'assigned cause' of insanity furnished by the friends as a part of the history of the case. It is not always the cause which the physician would assign. To estimate the cause of any insanity is such a complex operation that sufficient time cannot be given to the analysis of every case to make the results of value."—Dr. John B. Chapin, in *Journal of Nervous and Mental Disease*, December, 1897.

[2] R. S. Stewart, M.D., *Jour. Mental Science*, vol. xlii., 1896.

causation. Hereditary influences were noted in 22.8 per cent., and congenital defect in 5.7 per cent. Men suffer the most from business troubles, intemperance, and accidents, women from domestic troubles, and causes connected with child-bearing and the organs involved. Intemperance in drink and sexual relations and venereal disease form a group often found together, and as causes they are increasing greatly, much more in men than in women, and more in the upper than the lower classes. "Selfish indulgence, lustful gratification, insatiable animalism, general sensuality and fastness, are to a very large extent the grand parent-manufactory of the evil." General paralysis is an increasing disease,— the total admissions for five years ending 1892 being 8.9 per cent. of the whole, or nearly one in eleven.

There is much to lead us to take a gloomy view of the prospects of civilized humanity. Pauperism, syphilis, alcoholism, the abuse of opium and other narcotics, are commonly believed to be upon the increase. The country is crowding into the cities, leaving the one more lonely and making the other more stifling. The stress of business competition daily grows keener, and slow starvation is the lot of whole populations of honest artisans. Degeneracy springs up everywhere before our eyes from this evil seed. Viewing these things in the mass, we are appalled — but separately, each offers a distinct problem with hopes of solution at the hands of psychiatry, sociology, penology, and education.

Civilization is only beginning to study and cure its own ills, one is tempted to say. And yet, what gains have already been made for human welfare, and how little credit is given for them! Have we forgotten the Jacquerie, Wat Tyler, the Black Death, the Inquisition, the Thirty Years' War? And what of the causes of the French Revolution?

The French or German peasant of to-day enjoys a degree of physical well-being far in advance of what he possessed in the eighteenth century. Superstition, with its train of psychic epidemics, the scourge of the Middle Ages, is far less virulent and pernicious than formerly. The new science of sanitation has favorably influenced the health of the masses. Small-pox, to take a striking case, has almost entirely disappeared from Germany, where vaccination is most strictly enforced. Consumption, another of man's great scourges, and closely related with the genetic causes of insanity, has diminished in England by one third in forty years.

Perhaps the most disheartening view is that rather prevalent one which sees in our so-called intellectual progress a chief factor in modern insanity. It is a common observation that among races which we term undeveloped, insanity and idiocy are infrequent. The thought has been expressed with epigrammatic force by Tuke[1]:

"Insanity is simply the penalty which superior

[1] Daniel Hack Tuke, *Insanity in Ancient and Modern Life, with Chapters on its Prevention*, 1878, p. 9.

organisms have to pay for their greater sensitiveness and susceptibility. Civilization involves risks because it entails a higher form of mental life."

It were doubtless fairer to say that modern civilization entails new forms of mental life, more trying forms. It is the change, the competition, the pace at which we live, that strains us. We are not more intellectual than were the associates of Pericles, of Augustus, of Leonardo da Vinci; but we are forcing the commonplace man to try to stand where these men did. It is not the possession of intellectual superiority, not scientific thought and work, that endanger men's wits, but rather the intense devotion of gifted but unbalanced minds to the subjective life and the emotional side of art and poetry.

In conclusion, one little word must be said on behalf of our betters—the unhappy people of genius who are so commonly labelled "degenerates" by prosaic Science. They have more to suffer than the rest; let us try to mingle gratitude with our justice. Genius, like a sport in horticulture, exalts one part of the being at the cost of the rest, and tends to disturb the equilibrium which is the boast of the average man. But the human race cannot do without its leaders.

CHAPTER IV

EDUCATION

Alas! how much there is in education, in our social institutions, to prepare us and our children for insanity!

Wilhelm Meister.

A PERSON'S individuality is made up of the two factors, heredity and environment. This is the current statement as we hear it to-day. There is the greatest difference, however, in the application of the statement. To one class of minds the doctrine of heredity appeals with overpowering force, while others look upon the child's mind and character as plastic clay which we can mould into any form we please. After what has been said in previous chapters it will be needless to vindicate my appreciation of the force of heredity. In the present chapter, however, it seems to me that we are approaching the more important side of the case.

In speaking of environment we cannot omit education; and in describing education we must include vastly more than "schooling." For the child of defective or neurotic heredity no point of the daily life and surroundings can be neglected—all must be broadly and wisely directed into the ways of

wholesome and strong living. And at the same time we must at every step bear in mind hereditary predispositions; each year of the educational period, from birth up to twenty-five, has its peculiarities, and in every year heredity has special ways of showing itself.

The child has sometimes been regarded as a smaller man, of lesser force, but having nearly the same qualities and faculties as a grown person except when untamed natural depravity breaks forth and amazes his elders. Such a view answered the purpose of the old-fashioned schoolmaster well enough, furnished as he was with strap and ferule to combat diabolical restlessness and frivolity; a gleam of better comprehension visited the jurist who declared it unsuitable to hang an infant; other gleams illuminated the teacher who saw that the mathematical faculty is weak in little children; true wisdom tempered the zeal of the priest who postponed the date of the first communion to the fifteenth year. But the most comprehensive view of the nature of children and the educational process was his who said that " a child's chief business is *to grow* " ; or, in other words, that the child cannot be rightly understood by his teachers except by studying the law of his development. Childhood and youth are not a state, but a growth and a becoming. As a foundation for this study we need an acquaintance with the data of bodily growth, and change in the bodily proportions, organs, and powers. Side by side with this, a study of the rise

and growth of mental faculty should be carried on. A recognition of the different periods into which life divides itself, and a study of the great crises in life, show how each age has its own traits, its own progress, its own dangers from disease, while the mind, even more than the body, craves change of method and nutriment as it passes from stage to stage.

As we have already said, schooling is not equivalent to education. Education implies, first, a supply of food, clothing, shelter, sunlight; next, bodily exercise and training; next, mental illumination; and, crowning the whole, development of habits, morals, and the will. In a word, it is the " raising and breaking-in " of the young animal — the whole " upbringing " of the young person.

The present chapter, however, is not intended as a general treatise on education. Its purpose is limited to showing some of the ways in which mental soundness, strength, and stability may be influenced, favorably or the reverse, by early training.

The facts of a child's increase in size and weight are often mentioned under the designation of " the law of growth." In studying this law, it is most important to remember what is really implied in the word " growth." Do not let us imagine it as a simple addition to bulk. Human growth is not a simple increment, like the successive rings around the centre of a tree: it is a series of novel and unprecedented occurrences, revolutionary in character, one succeeding the other at regular intervals in a way to

supersede and supplant old ways; outgrowing old weaknesses and growing into new ones; dropping a childish gift for a manly endowment, a primitive charm for a riper grace; now inoculating the whole being with a new and often a renovating virus, now moving steadily forward for years in a fixed course of expansion; and all the while (which is our chief concern) establishing its own habit of psychic life, growing into sound or unsound ways of thought and plan, getting into harmony or confusion with its own nature, linking itself in wholesome bonds with its fellows or morbidly dissociating itself. The educational period is the time during which everything is to be done to counteract morbid inheritance and to build the mind for sanity. It is the great stone-age, the prehistoric period in the life of a man, the hunting, herding, and piratical period, which shapes the grand outlines of man into something which civilization, when it comes, can put at once to use. It is full of hints and warnings of danger to the future mind-life; series after series of nervous or mental disorders stand ready, each at its appropriate period of life, to give the danger signal and call a halt.

The main statistical points of the outline of the law of growth may be briefly sketched as follows:

The complete stature is attained by men about twenty-four and twenty-five; by women two years earlier. With later life we are not now concerned.

Growth is not uniform, but is divided into two periods of rapid and one of slow growth. Beginning

life with tremendous initial velocity, the infant trebles his weight in his first year. After this, growth is less and less rapid in proportion to size (though not absolutely less) till puberty. Then comes a second extraordinary start in growth, lasting some three years, and gradually diminishing until true adult life is reached.

The head and brain get almost their entire growth in bulk by the end of the seventh year.

These facts enable us to divide growth into four periods: 1. Infancy. 2. Childhood. 3. Boy- and girlhood (from seven to thirteen or fourteen). 4. Puberty and adolescence (to twenty-five).

It is very interesting to note some of the ways in which Nature first sketches out the plan, and later fills it in. The tall boy is but the sketch of a man, his muscles awkward, his frame not filled out. The sexual appetite comes ten years before the full desirable firmness of constitution is reached. The head of the child of seven is almost as big as an adult's, but it takes seventeen or eighteen years after that for the brain cells to ripen by time and rise to their full power. It would seem that the furnishing of the house is a much slower process than the external construction.

The mental history of each individual goes back to his beginnings. In determining the sanity of the future adult, infancy is important, childhood is important, and puberty and adolescence are probably most important of all.

During these stages of development the child is

indeed sheltered from most of the causes which lead to insanity in the adult — strong drink, vice, care, sexual strain, — and so we find that relatively few cases are recorded during the first fifteen years of life. But it is during these years (and, in fact, up to the age of twenty-five) that we are to look for the development of innate tendencies of various sorts, which display themselves in the form of various diseases. Each period of childhood is marked by tendencies to a special series of disorders. As the child's mental and bodily habits, so also do his common diseases, differ from those of the adult.

Among "children's diseases" we find a whole series of nervous disorders, which are held to be very significant of a child's constitution. They indicate his faulty tendencies, and in a general way point out the weaknesses we have to guard against. If they can be held in check during the period of growth, while the nervous tissue is so impressionable, and while nervous and mental habits are being formed for the rest of life, it is certain that we accomplish a great work for the sanity of the future adult.

We will therefore give attention to a brief statement of the principal of these disorders; for a certain part of which I must acknowledge indebtedness to Clouston's very suggestive monograph.[1]

1. Birth is a serious crisis, and many succumb to the strains or injuries which accompany the passage to the new conditions of living. More than one

[1] *Neuroses of Development—passim.*

tenth of the children in New York die under one month. During infancy, although the power of assimilating food is immense, there is little adaptability to change of diet; there is great susceptibility to slight defects in the quality of food, and an inability to resist heat, which in combination produce the numerous deaths from alimentary trouble in summer.

2. In infancy and childhood, the exceedingly rapid growth of the brain predisposes to certain affections. Appeals of all sorts are made to the child's newly wakened faculties, a flood of new impressions of most interesting purport, which he seeks with imperfect powers to combine and compare. It is in the power to combine and compare that he is physiologically defective. He is extremely quick in the assimilation of ideas through impressions from without, but his use of them is apt to be what we call fanciful; he does not judge from a fund of experience; in short, the control of an organized intelligence is wanting. There is a want of self-restraint, mentally, emotionally, and in the muscular life. He habitually explodes, instead of burning with a steady and useful flame. Technically speaking, he lacks inhibitory power.

In illustration of this susceptibility we have the fact that young children are often liable to *delirium* of a transitory sort during mild, feverish conditions. *Bad dreams* with frightfully real impressions (technically called night-terrors) are found at this age. And in the motor sphere, the frequency of

convulsions in early years confirms the impression of the instability of nervous function.

Rickets is especially a disease of early childhood, and its stamp is often found on the bodies of children. It is much more of a brain and nerve disease than is commonly supposed; it is founded on hereditary nervous tendencies such as are developed in parents by the devitalizing influence of city life, and is fostered in children by the lack of the great nerve-strengthener, sunlight.

These four disorders are considered by Clouston as of the utmost importance for the child's future; he finds them frequent in the offspring of insane and epileptic patients.

The educator should infer from these facts the necessity of a quiet and unstimulating life, with the silent invigoration of sun, air, and good food, in the earlier years of childhood.

The choice of a nurse, governess, or teacher may have much to do with making a child nervous or steady; the best intentions will not impart that subtile, contagious quiet and harmony which is so good for children. The family concert is not always pitched in the right key for the baby's best good. Parents, aunts, and cousins combine in stimulating the little one by dandling and tossing, by pokes, chuckles, and loud, sudden appeals, by all sorts of upsetting procedures calculated to elicit smiles. Among the poor, infants have to sleep with the rest in an atmosphere tainted with tobacco smoke, which occasionally does marked harm. The sleep of the

children of the poor, also, is often in cities much cut off by their habit of playing out in the street till the elders are ready to let them go to bed.

3. Between seven and thirteen the chief, or one of the chief diseases is chorea. Clouston observes that near-sightedness, headache, somnambulism, and nervous asthma appear at this age in many cases, though on the whole these years are rather free from disease.

Chorea (St. Vitus's Dance) is most frequent from eight to eleven, and is seldom found before six or after fifteen; it is therefore eminently a disease of the primary and grammar schools. It resembles hysteria in its preference for the female sex — two or three girls being attacked for one boy. It is said by Clouston to be found often in families where epilepsy, insanity, or dipsomania prevails; he thinks it always has a neurotic heredity. It is important to recognize its relation to school work. A child with this complaint should be taken from school at once, not only for its own sake, but for that of the schoolmates, for the trouble has a tendency to become contagious. Dr. Wm. Dale, in a late issue of the *Lancet*, says that "brain pressure of many studies in delicate and half-starved girls is the most potent cause of chorea in our [English] elementary schools." The ultimate mental consequences of the disease are diminished attention, impaired memory, irregular speech, and whimsical, irritable temper. Dr. Sturgis, physician to the Hospital for Children in London, speaks of the restlessness, the odd tricks

of face and hands, the misbehavior, which are apt to be the forerunners of chorea, and puts teachers on their guard against the injustice of punishment in such cases.

When school children (and especially girls between seven and twelve) alter in temper, work less well and less willingly than usual, get untidy and slovenly—in a word, degenerate mentally and bodily — inquire of the mother as to the home conduct and temper. Ask particularly how the child sleeps; whether she complains of headache or limb-ache; whether her food is sufficient.

He suggests the following as the best test, and one which the teacher can apply: Bid the child hold up both hands, open, with extended arms and palms toward you. If this is done steadily, both hands upright and both alike in position, the disease is absent, and is not coming on.[1] Of course it is not safe to say that the disease is present if the fingers do twitch.

There are various occurrences which teachers are in a position to observe, which would help them in understanding the mental condition of their pupils. Such observations on the part of teachers do not supersede the physician's work; they may often anticipate it and bring things to notice much sooner than would otherwise be the case. A serious effort to lead teachers to these observations has been made by Warner, whose immense experience as a school

[1] Article by Will S. Monroe, in *American Physical Education Review*, vol. iii,, No, 1,

examiner in London has entitled him to speak with authority. Two of his books especially deserve mention as attempts to found a practical system in mental hygiene for schools.[1] Their chief thesis is the correlation of bodily movement with psychical condition; they explain how to observe nervousness as indicated by the twitches and often spontaneous movements of the muscles of face and fingers, asymmetry of posture, voice, and in general the signs of abnormal physico-mental conditions as given by unconscious acts. A practical suggestion which has proved fruitful in the training of dull children is set forth in chapter vii. of the second- named book, consisting of exercises in training the attention to definite controlled movements of the fingers, hands, and eyes.

Stuttering is a disease of the same period as chorea, and is often associated with chorea-like movements. It is obviously a nervous complaint. Dr. Hartwell has called attention to the fact that its rise coincides with the period of rather early childhood during which the smaller muscles have not yet acquired facility in coördinating, or working together. It is his belief that in some children we require an amount of attention to delicately adjusted finger work, in kindergarten occupations and in writing, which exceeds the ability of the imperfectly

[1] *A Course of Lectures on the Growth and Means of Training the Mental Faculty*, by Francis Warner, M.D., London, 1890; *The Nervous System of the Child, its Growth and Health in Education*, by the same, 1900.

developed nerve centres for fine coördination, and that this excess tends to produce other disorders of coördination, as seen in the failure of tongue, lips, pharynx, and respiratory muscles to work together in producing orderly speech. Boys are slower in learning to coördinate than girls, and they are far more subject to stuttering. When taken in hand very early, a surprising amount of improvement is obtained with a moderate course of training, conducted in special classes with the aid of vocal and general gymnastics and music. No pains should be spared to lighten the load of mortification which this infirmity often places on young persons.

Hysteria is exceedingly common in young women, and far more so than is generally known in children. The statistics quoted by Clouston from Landouzy and Briquet give 216 cases as occurring before fifteen, 396 from fifteen to twenty-five, and only 169 during later life. It is worth noticing, also, that one third of the cases under fifteen occur in boys (Cloplatt). These are important facts for teachers to know. The condition of things in a hysterical person is not without analogies to what we find in chorea and stuttering. A tendency to it is shown by being restless with the eyes, fidgety with the fingers, assuming twisted postures; by excess in expressing emotion by laughter, words, or gesture; by want of control over words and actions. "This brain condition appears to consist essentially in too great a governance of mental states by impressions from other parts of the body, rather than by sights

and sounds from without" (Warner). Such a tendency must be combated, not merely in the usually prescribed way of "controlling one's feelings," but by systematic bodily training to the word of command in movements which cultivate the power of controlling attention along with muscular self-control. Such training is afforded by Swedish gymnastics and the like. Its benefit lies partly in the improvement of the health, partly in the introduction of new, unemotional trains of thought, and also largely in its power to use the vagrant energies of the unorganized hysterical mind for the organizing of useful and graceful functions. In a word, it supplies an urgent need of the hysterical constitution by introducing an organized relation between the parts of the system.

Near-sight is an affection scarcely seen in the youngest school-children, but which increases steadily in frequency up to the college age. It is fully demonstrated that it is due to a considerable extent to defective lighting of the school-room, to badly printed school-books, to bad arrangement and shapes of desks and seats, which encourage the faulty habit of stooping forward and bringing the eyes close to the book. Hereditary predisposition has considerable influence. There is reason to think that the general condition of the health has a good deal to do with myopia and astigmatism. The general flabbiness of tissue, which may be brought on by the unnatural confinement to chambers, and the want of vigorous out-of-door play, which city

life commonly involves, may with reason be suspected of contributing to the tendency to near-sight. We must strive against this tendency, which seems fatally inherent in our civilization, by abundant side-light, good air, cool rooms, good print; by discouraging the *penchant* (literally such) for stooping and getting close to work; by frequent intermissions, hearty play, and forbidding study upon an empty stomach.

The effects of far-sight have been much debated, but there is no doubt that the eye-strain it involves is for many children a serious cause of nerve disorder, appearing in a tendency to frown or twitch the face muscles, and in frequent headache; a most disturbing and even dangerous state for the nervous system, which is easily and at once rectified by the use of glasses. These should always be fitted by a trained oculist.

Dr. Myles Standish is in the habit of saying in an epigrammatic way that whereas near-sight is a case of the child spoiling his eyes, far-sight is a case of the eyes spoiling the child. In the former, a vast deal can be done to prevent increase of near-sight by correcting abuse of the eye. In the latter, glasses put an end permanently to the nervous distress caused by congenital incorrect eye-structure.

4. The period of adolescence (of which puberty denotes the initial point) is marked by a very rapid increase in physical size and strength and mental faculty, with the rise of a new set of desires and motives. Self-feeling is apt to be exaggerated.

There is an awkwardness and want of harmony in the use of the new faculties; there is turmoil and self-contradiction, uncomprehended longing, fluctuation of temper and purpose, restlessness and recklessness, in the midst of which sexual impulses and the religious feelings are prominent influences.

In the development of every child there are periods at which the mind receives impressions with extraordinary avidity. These are the periods of the budding of new instincts and faculties; and the age we are describing is eminently of this character. Within a year or two the dispositon takes a set in a new direction, often influencing the remainder of life. This is the great opportunity of the educator —the greatest in a lifetime.

Puberty and adolescence are characterized by chlorosis, defects in menstruation, hysteria, epilepsy, and adolescent disturbances of the mental faculties in many forms, including insanity, which is apt to be of a special type, partaking of the unsteadiness of the mental status at that age.

The amount of insanity among children is very small, but that among youths is greater than is supposed. Blandford,[1] quoting the English Commissioners' statistics for 1888–92, shows that between twenty and twenty-four it is nearly as frequent as at any later age; between fifteen and nineteen, it is about half as frequent as that.

Many of these statements may seem unnecessarily technical. They are introduced under a sense of

[1] *Twentieth Century Practice of Medicine*, vol. xii., p. 15.

the gravity of the responsibility which rests upon those in whose hands is placed the training of such a susceptible age, already a victim in large numbers to this terrible entailment. It is well worth while, too, to have it brought before our minds that certain of the affections of which we have spoken are closely allied to insanity, and that judicious treatment of them may do much to avert that issue. Briquet showed that hysterical women have eight times as much of nervous disease among their near relations as sound women do. Clouston says that in half the cases of adolescent insanity in young women there are hysterical symptoms present at some stage of the disease or preceding it. The inference, however, should not be carried too far.

The relation of the neuroses to adolescent insanity has never been thoroughly studied. We are not in a position to predict much. But it may be suggested that any deviation from the normal attitude of the child's mind is suspicious. The "old" child, the little Paul Dombey, may be unchildlike through the general exhaustion of frame due to a taxed brain. A deficiency of the natural "wildness" of youth may suggest the possibility of subsequent derangement, as well as an excess of impulsiveness and want of self-control. In general, development of a part of the nature, out of relation to the rest, is apt to be morbid.

Child mathematicians, child musicians, and child poets are rare, and we know they are all more or less pathological. I think that development of any faculty or

power in a boy or girl, in a lad or a maiden under twenty-five, that is premature in time, or that is clearly out of proportion to other faculties and powers, should be carefully watched and looked on with much medical suspicion.[1]

As regards the training of neurotic children, the whole drift of our argument is in favor of a full development of the bodily system, as against dwarfing or stunting. In taking means to this end we may be sure that we are in the road which leads away from degeneracy. Modern investigation seems to be leading straight away from the antique notion that the body is the antagonist of the soul; it stigmatizes the notion as deadly to the highest interests of mental sanity, right-mindedness, and chastity; it antagonizes the view that the puny are the bright ones, and traces clear connections between size of body and mental endowments.

It becomes us to be careful in our inferences. Certain tall races (Russian, Germanic, Celtic) are in the lead to-day; but the Romans were short, and the Jews and Japanese now are. All statements of size should be made relative, referring to the standard of race or family.

The relation between the nutrition and growth of the body and the vigor of the brain is best seen in the case of the feeble-minded. By way of exception, a few are beautiful and attractive; but as a general rule they are dwarfish, ugly, one-sided, irregular and coarse in feature, awkward in gait and

[1] Clouston, *Neuroses of Development*, p. 18.

movement, and harsh in voice. The muscles are usually weak, the fingers small; scrofula is common; they are very susceptible to cold; one fifth are epileptic, and they often fail to pass the half-way station in life for want of vitality. These statements regarding physical degeneration are applicable in proportion to the degree of the mental abasement. Dwarfishness is eminently a trait of cretinism. Bodily growth is also checked, along with mental, in the sporadic variety of cretinism, termed myxœdematous idiocy.

It has been made out in many series of school statistics that the larger children are on the whole more successful and more advanced in their school work than the smaller ones of corresponding ages. The fact has been denied, but I believe it to be sufficiently established. Success in college gymnastics is apt to go along with general success in study. Criminals average less in height and weight than the college boys; those at Elmira (young men) are about equal in size to college young women, *i. e.*, about four inches shorter than college men.

We have in gymnastics and sports a means of raising the efficiency of the national power to a degree of which we have no conception. Before we realize these possibilities through education we have two things to do: first, to give full time and full credit to gymnastic work; and, second, to provide rooms, apparatus, and lavatories fitted for varied and fully developed work.

In England statistics show that the upper classes,

brought up to sports as a part of education, are five inches taller than the lower ranks in life. In America it is a common observation that the girls who have been growing up with athletic sports have developed a taller race than their predecessors. We have certainly this to thank our sports for; no one to-day can say, as Catherine Beecher said fifty years ago, that she does not know ten women (among thousands of acquaintances) who enjoy vigorous health.[1] All this brings good hope for the future.

The new movement in favor of swimming baths, recreation grounds and playgrounds, and municipal gymnasiums is also very encouraging.

No one with natural feelings can help being glad to see children play. During the hour of play we give nature her turn as educator. If we grown people were responsible for the whole mental make-up of the young folks, what a direful set of prigs and puppets we should have! Fortunately, there is extant among children a great and ancient tradition, which has the force of law, describing the games which their child-ancestors played before A B C was taught. These games are well suited to bring out some of the basal traits of character and intellect — quick sight, dexterity of hand, agility, lung-power, voice, speed, endurance, with

[1] "I am not able to recall, in my immense circle of friends and acquaintances all over the Union, so many as ten married ladies born in this country and century, who are perfectly sound, healthy, and vigorous."—*Letters to the People on Health and Happiness*, 1855, p. 129.

love of fairness, self-assertion, will-power, social instinct, and general experience of unveiled human nature.

It may startle some to find "lung-power" included among evidences of character. But there is no bodily function which stands so near the centre of vitality as respiration. There is no condition of the human frame more antithetic to the cravings of vice than that of the panting player with the calls of the game ringing in his ears. Expanding the chest — increasing the "vital index" of the gymnast [1] — places the man or woman on a higher plane of vitality, which, it is the contention of the present book, lies at the basis of psychic health.

The child of nervous, "cultured," "gifted," "artistic" parents, is likely to need a strong bias toward the physical side of his education. Such a child is apt to have a brain built on the hair-trigger principle — it goes off too readily, shooting into infantile convulsions, St. Vitus's dance, stuttering, bad dreams, or delirium, as we have just seen. For many such children the happiest lot would be a separation from the nerve-fostering atmosphere of their brilliant parents during the period of girlhood and boyhood, and assignment to some farm or boarding-school where the robuster type of life is encouraged. For those who stay at home, a scheme of tonic hygienic life must be maintained. They must be

[1] The vital index is the ratio of the lung-capacity to the body-weight, and is considered the best numerical index of a person's general vigor and endurance.

allowed all the farm and fishing experiences possible in holidays. Their sleeping-rooms must be airy, uncarpeted, cool, sunny; their meals regular, frequent, with little or no meat and a plenty of milk up to the age of twelve, with abundance of butter, cream, and fat, — no coffee, tea, or beer, — and no sweetmeats except at meals; their sleep [1] very long (ten hours up to the age of twelve); their occupations to comprise a great deal of outdoor play (or walking); gymnastics as a steady thing, with fencing, boxing, riding horseback, dancing, and choral singing; manual training in sloyd and other work; and, if possible, for an hour every day, some useful toil in the sweat of their brow—a privilege which it is very hard to secure for children in cities. As for schooling, there need be no hurry; a child who is getting on in these branches can afford to postpone scholastic work as long as there is any doubt of his strength, say till he is eight or ten years old.

We owe much to some of our German contemporaries for the emphatic way in which they have described the traits of a class of children whom they designate as "minderwertig" — a term implying that they are on the whole lacking in power.[2] They are not imbecile or insane, but are irregular in ways

[1] Dr. Clement Dukes estimates the amount of sleep required by children as 13½ hours at the age of 5–6, 12 hours at 8–9, 10 hours at 12–14, and 8½ at 17–19. Quoted in Warner's *Nervous System of the Child*, p. 124.

[2] See J. L. A. Koch, *Die psychopathischen Minderwertigkeiten*, 1893; J. Trüper, *Psychopathische Minderwertigkeiten im Kindesalter*, 1893.

which prevent them from being in a normal mental state and displaying normal capacity; they are commonly said to be hard to educate. They are apt to display a combination of mental and moral weakness, mutually interdependent; as their education proceeds they often appear overstimulated, listless, incapable, or degenerate, and at last may become "spoiled" and depraved. Irregularities of bodily structure are common. Many such children are the objects of successive experiments, each bringing new failure, until at last their mental and moral opposition to rules makes them unendurable in civil society.

Among this class the type of "irritable weakness" is common. This is denoted by the excessive sensitiveness to painful impressions, physical or moral. To blame, loss, the parting or meeting with friends, they respond with exaggerated and unhealthy displays of joy or grief which is soon forgotten. They are heedless, fickle, and whimsical in thought and act. This is a type which produces child-suicides. Sexual precocity is not uncommon. There is often an appearance of precocious intelligence and vivacity, which tempts parents to urge them to study, but they are very apt to end in exceeding dullness, or even imbecility.

These children seem to lend themselves readily to parrot-like memorizing, and as they are easily forced beyond the limits of their strength they may become mere volumes of "facts" without the power of rational, connected thinking. Of such

was the charming, sprightly little boy who in his eighth year was commended for his Latin exercises, but at fifteen could not name a plant or tree in the garden, although very familiar with Linnæus's system, and when asked to estimate the height of an ordinary chamber said "Sixty feet." There is a glimpse of pathos in the story of a boy in a high grade of Latin school, who "was nauseated with verbalism and had utterly lost interest in study"; he was placed in an asylum for "difficult" children, and there one morning, while sitting over his untouched work, he overheard the asylum superintendent telling stories to the little children in the next room; his attention was drawn, he grew interested, then begged for and read the fairy-tales, and from this beginning mental interests re-awakened, and in a year he was again doing a reasonable share of work.

Among the "minderwertig" class (for which we have no better equivalent than "difficult children") a great many cases of nervous breakdown, nervous disease in general, and occasionally insanity doubtless originate, for which the school program cannot fairly be held accountable. Blame lies, however, with the school government, in so far as it fails to provide means for ascertaining the presence of such children, and giving them special attention. But in view of the official disregard of such obvious and well known matters as near sight and deafness in schools, it is doubtless premature to urge the adoption of measures to rescue these few exceptional

children from special dangers. The duty of picking out such children from the mass of those who may be called normal is obvious, but school authorities cannot yet see that it rests on them.

At the risk of partial repetition, the following succinct and emphatic statement from Clouston [1] is quoted as embodying the principles to be followed in bringing up the classes of children just described:

A FEW GENERAL CONSIDERATIONS IN REGARD TO THE PREVENTION OF THE NEUROSES OF DEVELOPMENT.

Heredity is no doubt the real predisposing cause of them all, and the sole cause of many, some of them being in certain cases inevitable during growth and development. But heredity is a question of degree and intensity in each case, and it fortunately needs in many cases an exciting cause to develop the diseases that are its outcome. That opens up to us a large field of preventive measures against the adolescent neuroses. One or two general principles we are safe in following as making for prevention. Build up the bone and fat and muscle, especially the fat, by means known to us, during the periods of growth and development. Make fresh air the breath of life to the young. Develop lower centres rather than higher ones where there is bad heredity. Don't give too much flesh and nitrogenous food during growth and adolescence, as being special stimulants to the higher cortex, and to the too early development and dominance of the reproductive functions and the sexual nisus.[2] Avoid alcohol and nervine stimulants absolutely,

[1] *Loc. cit.*, pp. 134, 135.

[2] In regard to sexual abuses among children, the reader will find references to the opinions of several authorities in the Appendix.

if possible. Do not cultivate, rather restrain, the imaginative and artistic faculties and sensitivenesses and the idealisms generally, in the cases where such tend to appear too early and too keenly. They will be rooted on a better brain and body basis if they come later. Cultivate and insist on orderliness and method in all things. The weakly neurotics are always disorderly, unbusinesslike, and unsystematic. Fatness, self-control, orderliness, are the three most important qualities for them to aim at.

The education of the defective classes is one of the most brilliant achievements of the century, and has immortalized the names of Seguin and Howe. Both these men accomplished what seemed impossible. The methods used by them deserve the study of all teachers for the insight into the fundamentals of education they display. The methods now in use in our schools for the feeble-minded are a kind of magnified object-lesson of the laws of teaching young children. It is from this point of view that I think it will be useful by way of illustration to present some of the traits of the mental life of this class of beings.

Attention, as we know, lies at the base of all mental acquisition. In the weak-minded, nothing is more characteristic of the whole class than their want of power to fix their attention, or to continue it. Serious matters must be continually repeated to them to make them understand. They pass from one subject to another with the greatest ease. They cannot wait for you to complete a sentence,

but interrupt with a question, and before you have finished the answer they interrupt again. They begin a piece of work, but seem to forget that they have begun it (Peterson). There is, however, a great difference in the power of attention of individuals, and upon this point mainly depends the possibility of making improvement.

Children and idiots are alike in this, that the voluntary control of attention is not strong; the motive of duty, or other high and abstract considerations, is not available to any great extent in the beginnings of education. The attention has to be captured by interest; and here we see a difference — the normal child is easily interested, while the idiot has to be aroused by strong appeals. Life is not vivid to him. His mental activity being weak, he gives little attention to the impressions of the senses. His senses, therefore, appear generally weak; the sight, hearing, taste, or smell is commonly defective, while the great general sense of bodily touch, of heat and cold, hunger and thirst, and other feelings within the body, and indeed of pleasure and pain at large, are markedly deficient. The teacher is therefore obliged to exaggerate, to use loud tones, large objects, bright colors, and, if possible, models and pictures of everything taught.

The feeble-minded have to be made more like normal children before they can be put to ordinary school work. They have not that excess of available energy which works itself off in play; they have to be roused by play, nay, first of all, they must

be roused to play. The teacher uses balls, blocks, and other implements as incentives to games of motion. The stimulus given to attention in handling these toys, with coöperation of the muscular faculties, associated furthermore with the gratification of the sense of color and form, the pleasure of successful accomplishment, and the teacher's sympathy, forms a brilliant illustration of the way in which play may be employed for awakening dormant faculties.

The acquisition of mental experiences and of data relating to the outer world through muscular activities forms a large chapter in the history of man's development. It forms the chief occupation of the baby—and of the beginners' class in feeble-minded children.

The first story of the educational fabric is built of muscular activities.

There is a very intimate relation between what a feeble-minded child knows and what he can do with his hand. And inversely, mental development is almost always preceded by, and proportionate to, increase in manual dexterity. Hand training in great variety forms an important part of the daily exercise of every pupil according to his ability. [Fernald.]

A study of moral traits shows in a rather startling way the possibilities which lie within the power of degeneration to produce. I refer to the class of moral imbeciles, of whom one finds specimens in every institution,—persons whose incapacity of

acting from moral considerations contrasts strikingly with apparently good general endowments.[1] It may be that this monstrosity of character is something comparable (in the inverse direction) with the excessive development of a single talent in the midst of general feebleness of mind which we see in the case of the *idiots savants*.

The superintendent of the Elwyn Training School[2] makes the following statement:

It is a mournful conclusion that has been reached after twenty years' experience, that in every institution of this kind, and probably to a far greater extent in our refuges and charity schools, there exists a small class of children to whom the offices of a school-room should not be applied. These are the so-called moral imbeciles, or juvenile insane, who are often precocious in their ability to receive instruction, but whose moral infirmity is radical and incurable. The early detection of the class is not difficult. They should be subjects for life-long detention. Their existence can be made happy and useful; and they will train into comparative docility and harmlessness, if kept under a uniform, temperate, and positive restriction. The school-room fosters the ill we would cure. In teaching them to write, we give them an illimitable power for mischief. In educating them at all, except to physical labor, we are adding to their armament of deception and misdemeanor.

[1] The word "apparently" should be emphasized. Some degree of mental inequality or imperfection is associated with the moral deficiency as a rule.

[2] Quoted by Dr. Kerlin in *Thirty-third Report*, from an earlier report.

I quote the following from a letter from Dr. Fernald:

The true moral imbecile is undoubtedly incurable. In institutions for the feeble-minded we seldom see the real moral imbecile—he is more often found in reformatories and prisons, sometimes in schools and colleges. I mean the cases with little or no intellectual defect, perhaps brighter than the average, and with all-round moral defects, not simply dishonesty, licentiousness, etc. A bad and troublesome imbecile is not a moral imbecile, as the laity are apt to believe.

As regards the general moral status of the feeble-minded, they are, naturally, easily led astray in the direction of wrong-doing, of the consequences of which they have no just idea. They may thus commit the most heinous crimes. They are, however, very rarely malicious by nature. Their status is that of imperfect evolution. They require to be taught lessons in decency, and they require special management at the onset of puberty.[1]

With all this, there is something which touches the observer with wonder and sympathy. When kindly treated and subjected to wakening influences, there is no class of persons that displays such gratitude and affection as the feeble-minded. It would seem that the instinct of mutual attachment is one of the most basic elements of our nature. At all events, their teachers feel their efforts rewarded more openly than is the case in schools of sound children.

[1] W. W. Ireland, *Mental Affections of Children*, 1898.

Ireland notes their capacity of receiving elementary religious instruction. Fernald

has known many undoubted imbeciles who seemed to have a good idea of the religious standard of their people, and who seemed to possess religious feeling as genuine as that of their people. The emotional side of religion appeals to them very much as it does to the plantation negro.

The picture of the status of the defective is a gloomy one; but the gloom is relieved by the thought that want of development is the essential cause, and that development (within the bounds which Nature sets for each individual) is in the teacher's hands. The description represents only the untrained child. The results attained by training affect not their intellect alone, but their entire moral condition, and especially their habitual behavior. From being pests in their families and neighborhood, they may, in a large part of the cases, be made peaceable and happy members of a family order.

Ireland[1] points out that a steady diminution in the prevalence of goitre and cretinism has been going on for at least thirty years in France, Switzerland, and Germany ; which seems most probably owing to the increase in the well-being and comfort of the people who live in the endemic districts, and their more careful attention to cleanliness and hygiene.

[1] *Mental Affections of Children*, p. 228.

Another direction in which new hope has been granted to humanity is the recent successful treatment of certain sporadic cases of cretinism (myxœdematous idiocy) by feeding with small portions of the thyroid gland of the sheep. The disease is believed in these cases to be due to the absence of the thyroid gland in the patient, with the consequent lack of a certain secretion which is requisite for the nutrition of the brain and of the whole organism. A remarkable gain in bodily growth and intelligence has been found to occur during the progress of this treatment.[1]

Outside of the class returned in statistics as feeble-minded there exists a much larger class (perhaps five in a thousand) of "backward" children, a type with which all primary teachers are familiar, who are so deficient as to be incapable of profiting by ordinary school methods. They constitute a distinct type, differing from the grosser types only in degree of defect; they display all the cardinal features of imbecility in a lesser degree. Few classes are without some such specimen, hopeless under existing conditions, yet fondled and defended by parental love which can see no inferiority in its own offspring. A movement for the education of these children in special classes under trained instructors has just begun in the United States, which up to the present includes the cities of Providence, Worcester, Springfield, Boston, Philadelphia, and Chicago.

Is there a distinct line of division between the

[1] *Mental Affections of Children*, pp. 237–249.

defective and the normal child? or do the classes grade imperceptibly into each other? The question may be put in another way, as follows: Should a skilful and experienced observer be able to say, in every case which he is allowed to study, "This child is (or is not) likely to develop into an imperfect adult, and its progeny is likely to be imperfect"? I am inclined to answer the latter question in the affirmative.

There are numbers of cases which deceive a superficial observer; of these I do not speak. Neither can one deny the imperfectness of our present means of diagnosis for some cases. There is, however, a very important distinction, which we can all understand, between the merely dull or slow child of normal type, and the morbidly deficient child. Such is the view of J. Batty Tuke, who finds that the two conditions do not merge gradually one into the other. The lowest of the healthy may be extremely stupid; the highest imbeciles may in certain ways appear superior to them, but the former class are simply uniformly dull, while the latter stand in marked contrast to them by their irregularity of mental conformation.[1] This point is well brought out in the Report of the Special Committee of the Charity Organization Society.[2] Children of this class are very imitative, may have remarkable memories, and may appear clever, but are deficient in reasoning power, feeble in will, or unable to

[1] Article on "Insanity," *Encyclopædia Britannica*.

[2] *The Feeble-Minded Child and Adult*, London, 1893, p. 7.

appreciate moral distinctions — in short, they are naturally termed " deficient " by those who have to do with them; they are the " irregular "-minded, and constitute our great difficulty. They need the care of skilful teachers trained in special kindergarten methods. The merely slow children do not belong with them, and are brought up into line by a certain amount of patient helping. Both classes are liable to degenerate morally, physically, and intellectually if neglected.

The success of a teacher must greatly depend on his knowledge of the individual character and mind of his pupils, a first requisite to which is the limitation of the size of classes. I give a hearty assent to the protests which are being raised by some of the foremost of our educators against the present mechanical system, which, like a factory boss, assigns to each teacher as many looms (*videlicet*, pupils) as she is physically able to control—a system based upon the assumption that pupils are practically alike for the purposes of the school-room. Better assume that no two are alike.

The system presupposes that the children are normal. As a matter of fact, there are few that can run together on a course of high and inflexible requirement; the standard for the best quarter of the class is not normal for the rest. These arguments against large classes are too well known to need support from me. Their force, however, is very much strengthened when we regard the individual pupils as one and all subject to possible deviation from

normal development into nervous disorders of all degrees of gravity, and to numerous and serious defects of physical endowment, which in the present crowded state of classes pass perforce unnoticed or ill-understood; the effects of which appear not only in injury to individuals, but in the hampering of the general progress of a class.

Defects of hearing and sight are so common in school-children that one would suppose that a teacher's mind would be on the alert to discover and provide for cases. Experience shows that this is not so. Class work engrosses all the powers of the teacher. The investigations of Dr. C. J. Blake and others have shown that deafness is very often overlooked, or, if noticed, it is apt to be thought that the child is stupid. A case was recently mentioned to me in which the child was pointed out as a fit subject for a special class (*i. e.*, a class of feeble-minded children), when absolutely all that ailed the girl was that she was exceedingly deaf.

In the experience of ophthalmic surgeons, it is exceptional to meet with a child suffering from defective vision who has not, before the defect was discovered, been repeatedly and systematically punished by teachers or schoolmasters for supposed obstinacy or stupidity. The very reverse of this practice is that which ought to obtain; and apparent obstinacy or stupidity should lead, from the first, to the question, "Can he see perfectly?"[1]

Teachers are less to blame for such occurrences

[1] R. Brudenell Carter, *Eyesight, Good and Bad*, 1880, p. 185.

than appears at first sight. They have learned at a normal school the elements of physiology and psychology, among a vast number of other subjects whose importance is made to appear overshadowing; but the bearing which these doctrines have upon their daily school duties is not impressed upon their minds by practice. There is no opportunity for practice until they enter upon school duties. The young, necessarily inexperienced new teacher finds, as a rule, no support, no practical guidance, in matters hygienic; her function as a hygienist is not conceived of by those who employ her, and she has mainly to rely on her own unaided common-sense for direction.

Mental incapacity, readily appreciated by teachers, is seldom recognized by parents, and parental pride is often a cause of great injury by preventing a child from being assigned to suitable special classes.[1] Injustice is, however, sometimes done in the other direction. There is a class of sound but very slow intelligences which are perfectly amenable to educative processes, but are unfitted for ordinary class work. One of the most satisfactory boys I ever knew was one of whom, at the age of twelve, the neighbors spoke with reservation as "so dull"; but to one who knew him, his integrity, docility, freshness and simplicity of interest, and fixity of

[1] "I have several times been consulted by governesses in the difficult and painful position of having undertaken the education of an imbecile child, whom the mother refused to admit as being wanting in intelligence."—Ireland, *Mental Affections of Children*, p. 355.

attention were most encouraging, and his beginnings in Latin, though made at half-speed, were thoroughly enjoyable to teacher and taught. Here were the essentials of a sound mental constitution, with a constitutional slowness which had made him unsuccessful in his classes. A child with such mental traits (to which I ought to add a fine physique) is not to be classed for a moment with defective children; "superior" would be a better designation.

A cause of impairment of mental power in children deserves mention in this connection, as being never understood by parents, and only quite recently known to surgeons. I refer to the presence of adenoid growths in the upper throat and the back passage of the nose. The trouble commonly begins in very early childhood; it continues, the child seems to have a chronic tendency to colds, becomes a mouth-breather, grows deaf, sleeps badly and with distressing difficulty of breathing, has a stuffy, thick voice, and is apparently stupid and unable to attend to study. Removal of these growths is performed by a simple and safe operation, very soon after which, to the gratification and astonishment of parents and teachers, the children hitherto sluggish and dull of comprehension make rapid progress, and their comrades soon cease to make a laughing-stock of them. The affection is not confined to little children; I am acquainted with a young lady who went through the operation at the age of fourteen with brilliant results. The hearing is usually restored at the same time.

The occurrence of insanity in children has been already mentioned (page 67). For a description of the forms assumed the reader is referred to such special works as Dr. Charles K. Mills's article in *The American Text-Book of Diseases of Children.* Our present purpose will be satisfied by noticing certain border-line affections which have a special interest for educators, comprising morbid or immoral propensities or impulses, with the " phobias " elsewhere described (see page 14). These traits are usually traceable to morbid heredity in some form. It is of importance that the fact be recognized that morbid fears and doubts, haunting apprehensions of an insane type in children, are rarely due to overwork and fatigue at school, as is frequently supposed; they are cases (as Mills says) of the class referred to by Oliver Wendell Holmes, the cure of which should have been begun two hundred years ago. It is also important to bear in mind that there are large possibilities of improvement and of averting insane tendencies by a sound, wholesome bringing up.

The question of over-study in the schools is closely connected with the foregoing.

To a considerable extent, the injury which delicate children receive in school is due, not to over-study, but to an ill-arranged course of study. But, with all allowance for this fact, there is indubitably need for a revision of the quantitative basis of the day's work, as well as of the character of the child's school occupations.

The phenomena of mental fatigue have recently been studied in a scientific way, with results which seem to show a rather rapid exhaustion of the powers during school work. Something more definite is greatly needed as regards the desirable or permissible number of hours of study, the frequency and length of intermissions, and the distribution of the work among different parts of the day. We may, however, safely recommend an hourly intermission; two sessions where practicable; alternating between studies of different sorts; assignment of manual operations to the afternoon. Swedish or other gymnastics of a sort requiring close attention and obedience must not be classed as a recreative agency.

We know a good deal about mental overwork in a general way, but it is difficult to give a rule which will serve to determine for each case the point where healthy fatigue becomes hurtful. We can say, however, that if the sleep is disturbed or insufficient, the appetite poor, especially the appetite for breakfast, the temper irritable or altered, there is something wrong which must be ascertained and rectified. It does not by any means follow that the school work is the cause of the trouble in a given case.

It is an important sign if a child shows excessive susceptibility to fatigue under conditions of ordinary work. Such children must be watched; the trait is doubtless [Kraepelin] one of the indications of degeneracy (or perhaps a better expression is

constitutional weakness), and may be a forerunner of severe neurosis and psychosis in later life. It is suggested by Kraepelin that the children ought to be sorted out into groups according to their degree of resistance to fatigue. The institution of special classes for the backward children will doubtless soon become general; and after this is systematically done, it will be easy to divide each class into an upper and a lower section under the single regular teacher.

There is no doubt that a considerable part of the breakdowns occurring among students are due to constitutional (*i. e.*, hereditary) weakness, insufficient stamina. Where there is evidence that a school is conducted with an intelligent regard to the principles of mental health, the occurrence of a breakdown in the case of an individual pupil should lead us to look for a predisposition in his case.

It would, however, give a very false impression if we dismissed the matter of overpressure in schools with these remarks. There is, and has been for a long time, abundant evidence of the existence of such abuses. The following citation from a leader in English psychiatry gives most important testimony.[1]

The psychological mischief done by excessive cramming both in some schools and at home is sufficiently serious to show that the reckless course pursued in many instances ought to be loudly protested against. As I write, four cases come to my knowledge of girls seriously

[1] Tuke, *Insanity in Ancient and Modern Life*, pp. 110, 112.

injured by this folly and unintentional wickedness. In one, the brain is utterly unable to bear the burden put upon it, and the pupil is removed from school in a highly excitable state; in another, epileptic fits have followed the host of subjects pressed upon the scholar; in a third, the symptoms of brain fag have become so obvious that the amount of schooling has been greatly reduced; and in a fourth, fits have been induced and complete prostration of brain has followed. These cases are merely illustrations of a class, coming to hand in one day, familiar to most physicians. The enormous number of subjects which are forced into the curriculum of some schools and are required by some professional examinations, confuse and distract the mind, and by lowering its healthy tone often unfit it for work. While insanity may not result directly from this stuffing, and very likely will not, exciting causes of mental disorder occurring in later life may upset a brain which, had it been subjected to more moderate pressure, would have escaped unscathed. Training in the higher sense is forgotten in the multiplicity of subjects, originality is stunted, and individual thirst of knowledge overlaid by a crowd of theories based upon yet unproved statements. . . .

The master of a private school informs me that he has proofs of the ill-effects of overwork in the fact of boys being withdrawn from the keen competition of a public-school career which was proving injurious to their health, and sent to him, that they might, in the less ambitious atmosphere of a private school, pick up health and strength again. He refers to instances of boys who had been crammed and much pressed in order that they might enter a certain form or gain a desired exhibition, having reached the goal successfully, and then stagnated.

He says that the too extensive curriculum now demanded ends in the impossibility of doing the work thoroughly and well.

Cramming for examinations to enter the English civil service is a common and ruinous practice; and to judge from German testimony the same evil prevails to a large extent in Germany among young men who wish to pay their whole military debt by entering the army as one-year volunteers, a privilege which implies passing a severe examination.

The German system of education—or, rather, the Continental—has of late years been attacked by hygienists in so determined and persistent a manner that the contest took the name of the "Ueberbürdungsfrage," or the Overwork Question. The conditions to which children, especially those of the better classes, were subjected all over civilized Europe were shocking in their excess of study-time, deprivation of play, and deficiency of light and air. Some of the most striking proofs of prevalence of invalidism among young people have been published in an official report upon the schools of Denmark and Sweden by Key and Hertel. There is now a strong current in favor of relieving the excess of scholastic toil. One of the quaintest products of German earnestness in this reform is to be seen in the existence of large tracts of land in the neighborhood of a number of their cities, set aside for school-play, to which the children are conducted by classes at stated times, and are taught how to play ball, tag, and other more complicated games *à l'anglaise* by

their regular teachers, who have been obliged themselves to " cram up " for the occasion.

In America (United States and Canada) there is a general feeling in favor of confining school hours to a reasonable limit, and of forbidding the assignment of home-lessons to young children. In our country the question of overwork, merely as regards the amount of time devoted, is practically settled among intelligent educators. Of more direct importance just now seems to be the question of hunger. It has grown the fashion to concentrate all the school work between the hours of 8.30 and 1.30, which is a convenience, but which puts the food-question all out of joint. I recall the pained expression with which the head of a large private day-school spoke to me of the injury which this arrangement appeared to be doing in her own school, going so far as to say that " the last hour of the morning is merely a spurring on of the exhausted — is practically time thrown away." The continued stress has been greatly relieved by a proper hot luncheon served in the middle of the forenoon in the case of the Pratt Institute and the Boston high schools. I am told by headmasters of grammar schools that their teachers are all instructed to look out for children who come without breakfast, and in such cases always to send them home.

In what remains of this chapter I wish to consider some of the mental faculties which are or should be

objects of a teacher's care, and to point out how the teacher's work, broadly conceived, may import into the mind the elements of vigor, stability, and capacity to resist stress or shock.

In this matter I think we may draw valuable hints from the new and growing science of Child-Study. It is altogether beyond our purpose to give an account of the growth of this remarkable movement. Its object is to gauge the faculties and tastes of natural children at different ages by all sorts of tests, direct and otherwise. On the physiological side it gives us estimates of the mental fatigue induced by study in children, and the relations between bodily and mental fatigue, or between study and gymnastics. The laws of growth and development form another section of its work. It has studied the development of the faculties in earliest infancy; and in older children it has given us striking presentations of the natural history of imagination, fear, anger, affection, the social instinct, religion, and other basal elements of human nature. In the pedagogical way it has furnished a great many illustrations of the preferences of children for this or that subject of study, or kind of amusement or play.

The greater part of adults lose even the memory of their childish habits of mind. Middle life, with its growing preference for generalization, tempts to the establishment of theories, too often subjective in their basis, and the most devout worshipper at the shrine of childhood is apt to do the most

mischief by interpolating his own traits and mental habits into the picture he draws of infancy. We " read our own thoughts into " the acts of children.

On the other hand, it is found that the average young woman in normal schools is in need of being reminded of the very existence of children—tiny yet important beings walking in the shadow of forest-like systems and psychologies, yet visible even to the naked eye if one will but get down off one's high horse for a moment. One school of child-study has taken the sensible course of asking the students to notice anything whatever about any children they see; and most remarkable revelations have come from this—one girl has discovered that if you smile at a little child it will smile back, and so on—the result being to show the budding teacher that her future pupils have character as well as mind,—in fact, are really *persons* of a rather extraordinary variety of type, and in no wise machines for grammar grinding.

For those interested in child-study it will be useful to know of Mr. Wilson's excellent *Bibliography of Child-Study*, published in 1898. Frederic Burk has a very complete article, entitled " Growth of Children in Height and Weight," in the *American Journal of Psychology*, vol. ix., No. 3, April, 1898, with a full bibliography, summing up all the principal results in this branch of child-study. MacDonald's *Experimental Study of Children*, issued in 1899 by the U. S. Bureau of Education, with an extensive series of synopses and reports of the

work of various observers, covers the whole field. The name of Dr. Francis Warner of London is well known in connection with the examination of vast numbers of school-children. Among his numerous works I may mention: *The Study of School-Children and their School Training; Mental Faculty;* and one which has just appeared on *The Nervous System of the Child, its Growth and Health in Education,* which is professedly an exponent of the methods of child-study in this direction. Dr. Warner has given much attention to the visible signs of neurotic conditions in school-children, and has endeavored to place the subject within the reach of teachers.

Too great emphasis cannot be laid upon the subordination of scholastic interests to those of a physical order in children of nervous tendencies, or who are precocious or one-sided in their development. Nevertheless, there is a point of view from which the strictly mental training becomes of the highest importance for such children; I mean the fact—for such I believe it to be — of the superior resistance and stability of the well-trained brain, as compared with the unschooled and neglected.

A disused organ or faculty is very apt to become a diseased organ or faculty. The presumption is in favor of the use of any normal faculty, rather than its neglect. Nothing is more typical of a degenerated organism than the suppression of a part of its organs or functions; while the undegenerate being of noble type is characterized by symmetry of form and fulness of development in all parts. Analogy

leads us to infer that the highest type of mind equally with that of body is that which is well-rounded and all-sided. That a mind allowed to run to waste is fruitful soil for vice and mental disorder to spring up in, is a truism for those familiar with crime and insanity.

The health of each separate faculty and the collective health of the organism (body and mind) are best promoted by first building the physical and anatomical structure; second, by waiting till Nature wakes up each faculty in the child; and third, by a vigorous and adequate training given to the faculty, when ready for the task, and no sooner. The danger of premature action is greater than that of postponement. But the neglect to use the right moment involves a loss, not easily recovered, perhaps never. The large number of uneducated persons found among the criminal classes points a moral here.

Overtraining, unfortunately, is an exceedingly common thing in modern civilization. But as civilization advances we begin to see more clearly that its dangers lie in the one-sidedness which it impresses upon our lives — the tendency to specialize in grooves. Our intellects are not overtaxed as wholes, but in parts. The blacksmith's arm may yield to "hammer palsy" from overuse; the scribe's fingers lose their cunning in the same way through writer's cramp. Business life has a very strong tendency to limit our mental growth to one line; and in science we are already beginning to say with

real grief, as one after another of the leaders passes, "There goes the last of our all-round naturalists," or "physicists," or "our great family doctors."

Assuming, then, that our child has been made to see color and form understandingly, to know and enjoy it; his fingers made dexterous with all manner of tools, and his heels with skates; that numbers, symbols, triangles, words and their values, the form of the world, its parts and products, and the doings and wisdom of them that dwell therein are being unfolded before him, let us have in mind at every step that it is not the knowing of these, but the appreciation of their relations to each other, that constitutes the well-educated person. The faculty of associating knowledge, comparing, weighing relative values, inferring general truth from details, is the highest intellectual power. All others are only contributors to it. It links every part of the mind to every other, strengthening each by each.

Sanity has been defined in a previous chapter as harmony with one's psychic environment. This expresses the fact from a social point of view. The individual, viewed by himself, may be similarly defined as being sane in proportion as his own little inner world of wishes and ideas is in harmony with itself. The education which unifies the mind, promotes mutual comprehension between different regions of thought, prevents clashing of views, puts notions in their right place, and sets the will in its place at the head, is that which builds for sanity of mind.

For the sake of clearness, the following points will be considered in order: Activity, Observation, Memory, Attention (and self-control), Logic, and Judgment.

1. Activity is the key to all mental growth of a well-balanced and healthy sort. The type of intellectual character which is to be built up is the active, the original, the self-controlled. It is fitting to place activity at the beginning, because it is the characteristic of normal infancy and childhood. The child's nature craves to be doing something, making something; it is this profoundly basic tendency that makes "card-pricking," carpentering, and gymnastics the favorite occupations in summer free schools. We all learn by doing; children begin by making this rule universal.

It is worth hours, nay years, of reflection, for the teacher to get an insight into the principle *that action is on a higher plane than thought.* Not mechanical, unconscious reflex, or unconsidered action, but action based on correlative thought, is what is meant. Neither is muscular activity and skill what is meant, though the bodily accomplishments are of the highest importance. The principle to be recognized is, that every one of our feelings and thoughts has its correlated outward expression, and that the laws of physiology, of mental health, and of character, require the completion of thought or feeling by expression in action. And as that which completes is the higher, so action is higher than feeling or thought.

We have no need to undervalue the intellectual pleasures, nor the desires and feelings. A desire or sentiment is fuel to the mental engine. Yet, the object of an engine's existence is not merely to get up steam, but to make the steam work. In this there is involved the antithesis of sentiment and sentimentality, which has never been better expressed than in the words which I quote from Phillips Brooks:

> The great human sentiments are the only universal and perpetual powers . . . It is not sentiment, but sentimentality, which is weak and rotten. Sentiment is live, and terse, and solid; sentimentality is dead, and flaccid, and corrupt. Sentiment is just; sentimentality has the very soul of injustice. Sentiment is kind; sentimentality is cruel. Sentiment is intelligent; sentimentality is senseless. Sentiment is fed straight out of the heart of truth; sentimentality is distorted with personal whims and preferences. Sentiment is active; sentimentality is lazy. Sentiment is self-sacrificing; sentimentality is self-indulgent. Sentiment loves facts; sentimentality hates them. Sentiment is quick of sight; sentimentality is blind. In a word, sentiment is the health of human nature and sentimentality is its disease.

In spite of the strong practical bent of our race, there is an immense amount of emotionalism prevalent. We have made gains since the time when girls envied each other the power of fainting; they now prefer to be good at "putting." The temptations of to-day lie in a different direction. Æsthetic enjoyments are placed before us in such profusion that

it is hard not to run into a debilitating excess under the guise of "culture." It is confessedly the object of art to affect the feelings—but there is a choice between ways of expressing them. As a rule, the natural reflex act of shedding tears is not the thing to be aimed at in raising emotion to a higher plane. It is good in itself, because natural, but it does not go far enough. A better vent for the feeling of moral elevation which art produces would be the writing of a neglected letter, the mending of a neglected rent, the payment of the music-teacher's long-neglected bill—in a word, taking some trouble to lift a moral burden.

Probably the most insidious form of mental voluptuousness is the hearing of brilliant sermons and lectures. In fact, all mental enjoyment which remains in the purely passive state tends to the weakening rather than the strengthening of the mind. Instances of the desired active attitude of mind include the simple recalling of what was said; the analysis of an argument; a discussion, and an attempt to make another person feel it as the hearer did. Teachers make use of this principle in asking the scholars to repeat or write out a story which has been read to them. Mothers who read to their children have a great opportunity of eliciting native thought by these means.

The overcoming of inertia, mental or bodily, is something to which children must be trained till it becomes habitual. Ready responses, prompt obedience, alacrity in undertaking, are wholesome

habits. The whole tendency of the education should be to discourage saying "I can't." Shrinking from pain, from effort, from the disagreeable in our daily contacts, is a sort of moral cowardice; to learn to do the disagreeable without hesitation is one of life's best lessons. "When you are ashamed to do anything, go straight and do it."

In a word, character is the power to say Yes and No, and this power is of immense importance for mental health. Childhood is the time for this. From one fourth to one third of the cases of hysteria originate before the age of fifteen. Hysteria is of all nervous disorders perhaps the nearest allied to insanity; and it is certainly the one condition which is most amenable to the control of the will. The hysterical child too readily obeys eccentric and morbid suggestions; it needs to establish a closer connection between its lower and emotional states and the higher powers of will and judgment. As J. H. Lloyd observes[1]:

A defective or unwise education has much to do with the production of hysteria. The child that is constantly indulged, never corrected or controlled, taught to regard itself and its own wishes as always first, allowed to excite the emotions and imagination with fictitious literature, not disciplined to self-control, to self-denial, to duty, and to the cultivation of the higher moral and intellectual faculties, is the child that is most apt to display the symptoms of hysteria. It must not be inferred, however, that hysteria is necessarily perverseness, selfishness,

[1] *American Text-Book of Diseases of Children*, 1894, p. 729.

and simulation. This is a too common error, and one which unjustly attaches to hysteria a certain measure of opprobrium and contempt. It is true, rather, that in some of the finest minds a defective education leaves undeveloped the essential qualities of self-knowledge and self-control.

2. *Observation* is so manifestly the business of childhood that I need only mention its claims. The unobservant type of child is apt to be the inactive. It will of course be understood that self-observation is not what I mean; the introspective type is naturally the unobservant.

The following quotation from R. Brudenell Carter[1] seems to me to touch upon a matter of the greatest importance, and I heartily concur with his conclusion:

> The matters which are lost by the short-sighted, as by the partially deaf, make up a very large proportion of the pleasures of existence. I am accustomed, on this ground, strongly to urge upon parents the necessity of correcting myopia in their children; and I am sure that a visual horizon limited to ten or even twenty inches, with no distinct perception of objects at a greater distance, has a marked tendency to produce habits of introspection and reverie and of inattention to outward things, which may lay the foundation of grave defects of character.

Among a variety of useful suggestions about children, Warner[2] has some on the introspective habit,

[1] *Loc. cit.*, pp. 105, 106.

[2] *Growth and Means of Training the Mental Faculty*, p. 94.

or the habit of probing one's own character. He justly says that when this necessary operation is undertaken, it should be with the full energy of the waking mind. He finds that children may fall into the way of doing this after going to bed, and allowing the train of thought to exhaust their brains, instead of falling at once to sleep. For such tendencies, he recommends muscular exercise; or, where needed, rest by lying down in the daytime; or the stimulus of outward ideas, supplied by having a story read aloud, or some pleasant imagery suggested to the imagination.

3. *Memory*, as denoting the name of a faculty, is a kind of generalized expression for the power of storing and reproducing impressions, which belongs not to the brain alone, but to nervous tissue in general. It furnishes a sensitive index of the condition of the nervous system, for the time being, whether of vigor or depression. Its loss is a usual indication of the approach of age. Remarkable memories are not in themselves a proof of superior general mental power; they occur in some cases associated with semi-idiocy, though they are also the gift of many of the ablest of men. It is often said that the power of memory depends on the attention and concentration of mind that is employed when an object is present. This is so far true that very little mental work of any kind can be done without concentration. But no degree of effort in attention will make up for lack of vigor of perceptive power.

The value of memory depends very much on its

quality. Haziness, uncertainty, or vagueness of thought characterize intoxication, idiocy, enfeeblement of mind-power in general. The opposite states of clearness and definiteness are tokens of vigor. We recognize the fact in our daily experiences, when we find that a fresh mind clears up problems and brings things back to memory which were our despair when in a state of weariness.

A young child's instinct has leadings towards the establishing of habits of definiteness. In pictures, that which is preferred is the single object—a horse, a man, by itself. Repetition pleases; the old story or the old rhyme can be given scores of times—and it must be given in its original form, each incident as it was first told, or objection is made.

It is to be feared that the habit of clear memory is impaired by some parts of the school work of many children. A teacher who is satisfied with unclear ideas for her own mental housekeeping is not likely to help children in this matter. Many a young person has a good native faculty of memory, but displays a confused memory of his studies. In Latin, for example, he may make a fair translation, and yet may be hazy in his mind about almost every detail of the lesson: the meaning of the English equivalent used, the pronunciation, the tense, etc., of the verbs that occur, are points upon which he feels no certainty, and frequently, also, there is no rational meaning attached to the passage. The school years pass on, only increasing the general fogginess of the subject—years of positive injury to

the thinking powers, apart from the gross waste of time.

"This boy has never learned how to study," is a common complaint. Children are not made to know what they are about and how to go about it; what the object of a lesson is, and how to attack it, and how to know whether they have succeeded.

4. It is of more importance to a child to have the power of *application*, that is, of *attending* to the subject, than to know every fact that is taught in the school. To hold the children strictly to their tasks, and yet to recognize the limits of their power of attention, is a work of the highest skill in teaching.

Application (attention) is not only the basis of all learning, but it is in itself a form of moral discipline, being a direct act of the will in obedience to a sense of responsibility. This view gains in importance when we recall the facts that are reported as to the mental state of the average young criminal. Precisely the inability to apply the will to continuous mental effort is what is there noticed. Of the fifteen hundred young men in Elmira Reformatory, sixty per cent. are illiterate, cannot read and write at all, or only with difficulty. The inability to attend is perfectly characteristic of their mental state when they begin their studies in the institution. They practically labor under a deficiency in will-power as regards this form of effort. There is plenty of stubbornness, but not much power to adhere to a new and unfamiliar purpose. School work, mostly elementary, is one of the essentials in

establishing new habits in the boy to be reformed; the application and perseverance required are actual curative agencies.

The unsteadiness of attention here described is traceable back in many cases to the sensational life of city streets from which a large number of young criminals spring up.

> The continual distraction of the city streets is bad for the child intellectually; in keeping him from continued earnest application to a single end, it prevents the formation of an individuality. The whole tendency of these street confusions is toward both an unstable nervous system and an unstable character.[1]

Hence truancy and illiteracy; and from the truant of ten to fifteen years there springs the young "tough," and, later, the "first offender" on his way to a reformatory.

A defective control over the temper is typical of a large class of criminals. The favored means of imparting this control at Elmira is by training in the use of tools, by the method known as sloyd. In the very beginnings, in the simplest possible processes of measuring and cutting, the beginner is apt to show impatience, bad temper, or what we call "nervousness" when we ourselves display it. The wood in which one works then becomes a record, an unimpeachable witness of the failure to attend or to control oneself. Thus the mind is trained step

[1] *Report on Vacation Schools and Playgrounds,—Borough of Manhattan and the Bronx*, 1898.

by step in the habit of putting itself to a task and holding itself there. The pupil is shown by experience that success in the making of any article depends on the moral qualities of attention, patience, self-control which are put into the work. Irresponsibility and want of self-respect are thus in the end replaced by a sense of conscious power over matter — and over self.

Manual training is only one of the best among many methods of developing self-control. The moral benefit is obtainable from anything which requires perseverance. To the reforming felon, it is of the greatest practical importance to learn elementary arithmetic and writing, and the struggle he makes in forcing himself to conquer them is worth even more to his character than the knowledge gained.

Attention, self-control, and obedience to law are three trunks which spring from one root. It is more than mere coincidence when the teacher says, " I must have order before I can teach." I am strongly inclined to think that the basis of the power which the kindergarten displays in civilizing children is largely centred in its wise development of the power of attention, giving to it a continuity and a unity which is altogether lacking in the " training of the street." That this power is beginning to be acknowledged by those who understand the masses, is seen in reports from various localities, of which the following[1] may serve as a type:

[1] *Report of Chicago Schools*, 1898.

The transformation in the actions, language, and spirit of the young children who are taken from the street and placed in the kindergarten is wonderful. At first many are combative, resentful, rude, selfish, greedy, and show the perverting, degrading, demoralizing influences common to the undisciplined child. A few months' training in a good kindergarten makes these same children neat, obedient, self-helpful, thoughtful, and helpful to others ; disciplines them unconsciously to right thought and action, and lays the foundation for the development of true men and women.

Among the list of virtues which that most practical of men, Benjamin Franklin, drew up that he might exercise himself therein, there stands one not commonly recognized under the name he gave it— "Tranquillity." His intimacy with the Quakers of his adopted town is more likely to have suggested this than his Boston life. While writing this chapter, I came upon a quaint illustration, which reminds one of the practices of that sect. In one of our largest and best institutions for the feeble-minded, I was shown into a room where a dozen of the least intelligent were sitting side by side. "What are these girls supposed to be doing ?" was my question.

They are sitting still; they are doing it as a part of the day's programme, just as they will presently dress for a walk out-of-doors. To sit still for a certain time is a part of the daily plan for all the children, and it is found to have a most beneficial influence in lessening that excitability and noisy rudeness which are so common among neglected children when admitted here.

Surely there is something in this which is based on the soundest psychology. Violent acts and words wake a loud echo in the mind; but enforced quiet of body, the "relaxation" of Miss Call, is a calmative agent in nervous states.

And this deliberate calming of impulse is harmonized in the same institution with most vigorous incitement of the dull mind by appeals with voice, movement, color, form, models, pictures, sports,—everything to wake up the intellect. It is a serious mistake to confound quiet with stupidity.

No one who reads the literature of insanity can fail to notice that self-control is insisted upon as of great importance as a means of checking tendencies to mental disorder. Perhaps some light is thrown upon the connection of these two by what we have been considering. Rather than myself take the exhorter's stand, let me call to my aid a sentence from the author of *Sartor Resartus*[1]:

> In which habituation to obedience, truly, it was beyond measure safer to err by excess than by defect. Obedience is our universal duty and destiny; wherein whoso will not bend must break. Too early and too thoroughly we cannot be trained to know that Would, in this world of ours, is as mere zero to Should, and for most part as the smallest of fractions even to Shall.

The habitual disobedience of young people to the rightful authority, whether that of a parent, or of a conductor, captain of a vessel, driver, or others

[1] *Loc. cit.*, ii., 2.

placed in charge of our lives, has so forcibly struck Dr. Stearns that in his excellent work on *Prevention of Insanity* he speaks of it as a national trait, and as a mental habit which may well be mentioned among things which predispose to mental derangement.

In the kindred field of reform we have many other attestations, from among which I select the following, expressing the conviction of one of the wisest and strongest friends of criminal women — the late Mrs. Ellen C. Johnson, head of the Massachusetts Reformatory Prison for Women:

I am convinced that to inefficient parental management may be attributed a large proportion of the crimes that fill our prisons, because it leaves the child without the foundation of obedience and self-control, upon which alone may be built the superstructure of enduring manhood and womanhood. Time and again have I heard from the lips of sentenced prisoners the pathetic confession of a wayward and disobedient childhood, of passions indulged, of speech unbridled, of habits formed by the pressure of untoward circumstances, without efficient check or guidance from those whose first obligation was the proper training of the soul entrusted to their keeping.

5. I will not discuss the value of the training imparted by mathematics and *logic*. What may be said under this head has already been partly indicated in remarks upon the need of accuracy, under Memory.

Good *judgment* should be sharply distinguished from logic. The logician may be compared to a

bridge-builder; he can construct by the laws of his profession — which is a grand thing,— but unless he has judgment about materials, the work will not stand. Skill in the dialectic art is a snare to its possessor, if not balanced by skill in judging of premises.

Good general judgment means a knowledge of the values of things. Values are relative and mutual. The value of one thing is its power in relation to another,—its influence upon the other. We learn values, therefore, by associating our knowledges. Here the doctrine of "apperception" comes usefully into play. For an illustration of my meaning, take the case of an architect who is planning to decorate a schoolroom, and thinks of colored ceilings and walls. Each color suggests *three* ideas to him: his own enjoyment of it; its supposed cheering influence; its harmony with other decorations. He selects red. A chance memory occurs to his mind— "Red is trying to the eyes,"— and his judgment is reconstructed on the wider basis of *four* ideas.

The habit of seeing into things ought to be encouraged from the beginning, as far as sorts with the child's age. The thoughtless child is he who does not connect his act with other persons' lives. The "want of imagination," so called, which is really only the habit of not joining other interests to our own, makes one selfish and harsh. Selfishness is often a negative trait—a want of good moral manners — a product of the parents' neglect and want of social insight; a manifestation not so much

of evil character as of want of trained sense. Sensibleness is a pretty valuable endowment, and high in the mental scale, too, for if this analysis be correct it springs from a free use of that power in the brain, of late development, whereby one region of the cellular substance communicates with another.

The mental training that brings about this condition must be interwoven with the child's development; it cannot begin too soon (though it may easily be overdone), but it must take an increasingly prominent position as the faculties enlarge. The forming of associations between arithmetic and geography, language and history, geography and history; the habit of seeing through the imagination; the converting of book-lore into realities; the refusal to rest in empty words, and the insistence upon getting at " the bottom facts " of any subject — these instances may help in some degree to convey my meaning. The enemy of all this is what is called " cram." Great public systems of examination are based upon cram. Whole sets of school and professional books are written to meet the demand for cramming — you will find those that consist of nothing but sets of detached questions from end to end. There is no doubt of the loss of mental power which such practices bring. It is possible, by adherence to strict memory methods, to ruin the powers of the growing student for thoughtful study.

" Considerateness " is a term for the habit which some minds have, of letting any new notion come readily under the controlling influence of many

others, whereby a balance is established, self-control asserts itself, and momentary jets of feeling are kept from undue influence over our acts. The trait is not characteristic of young children and requires cultivation.

The train of thought which was begun as an analysis of mental disciplines, has led us, again and again, by inevitable associations into the domain of what is called morals. It would have fallen short of its practical uses if it had not done so; for sanity and morality cannot be separated. A very frequent manifestation in insanity is its dissociative action. It throws one out of sympathy with neighbors in many ways; it disqualifies the patient from civic and legal functions. The egoism of the insane is perhaps not a universal, but it is a vast fact. Where it is not self-assertive it is at least self-centred, and burrows in its own viscera, self-parasitic, self-poisoned.

The following quotation [1] vividly depicts the egoistic, neurotic type of young persons, associated with unfortunate parental influences:

> There is one case in which this [parental] influence is directly productive of insanity, and that is the case of an hysterical girl with a foolish, weak, indulgent, fussy, anxious mother. The mothers of hysterical girls are often of this description, and their influence upon their children is noxious in a high degree. The girl whose salvation depends on being "taken out of herself";

[1] Mercier, *Sanity and Insanity*, p. 372.

upon having her attention withdrawn from her own cœnæsthesia (general sensations), and concentrated upon externals; upon being induced and compelled to interest herself, not in her own feelings, but in what is going on in the world around her; is taken in hand by an over-solicitous mother; put to bed; shut off as far as possible from commerce with varied scenes and external interests; and taught by continual inquiry into "how she feels," by continual expatiation to friends and visitors upon her delicacy and precarious condition, to concentrate and intensify the interest that she is naturally predisposed to take in her own sensations; and is thus urged and worried into a condition which always partakes of the nature of insanity, and which occasionally culminates in a definite outbreak of mania.

The single point of imitation of the parent's traits is of so great importance in forming a child's character as, in the minds of many, quite to put in the shade the influences of heredity. The neurotic child must be placed with women who have a calm, healthy, cheerful temper, a steady will, affectionate feelings, and common sense; to which may fairly be added the requirement that they should be trained in a good school of care-taking, one of the best of which is doubtless a well-conducted kindergarten.

The following summary statement from the pen of one long known as a student of this subject[1] will furnish an appropriate conclusion of this discussion.

[1] Mary Putnam Jacobi, "The Prevention of Insanity, and the Early and Proper Treatment of the Insane," *Journal of Social Science*, No. xv., 1882.

The three great elements in the moral substratum of a person predisposed to insanity are: the egotistical predominance of the instincts over the faculties of reflection and external relation; the ineffectiveness of the will, even when this is impulsive or violent; the inaptitude for ideas, resulting in their poverty and imperfect combination. The whole nature is shrunken upon itself; there is not enough vital turgesence to expand it to its normal circumference, and to the point of contact of this with the external world. The cardinal point in the management of such natures is, therefore, the expansion of their shrunken individuality. This is to be effected by means of a strenuous educational system, directed at once towards the repression of the egotistic instincts, the enrichment and systematization of the ideas, and, through multiplication of acts and external relations, the energizing of the feeble will. . . . There is needed a far-sighted, comprehensive, minute education which should begin with the dawn of consciousness, and extend, if possible, through life.

CHAPTER V

SELF-EDUCATION

Sapiens ; sibi qui imperiosus.—HORACE, *Sat.*, ii., 7.

THE age of twenty-one confers upon the growing young man the privileges of an adult, as respects his social relations. He is conventionally "grown up" at that age. Measurements of stature, however, indicate continued growth, in many cases extending to the twenty-fifth year. There are some data which point to a further growth up to the age of thirty, but this remains a mooted point with anthropologists.

Measured by character, we find a different scale of things. Examination of photographs at fourteen and twenty-one shows great changes, but the comparison of twenty-one with forty is equally striking in point of development of intelligence.

Man's life is of such a nature that it never rests long in one attitude. Our growth is a succession of growths, each with its trajectory curve, rising rapidly and then declining more slowly. In each case, it is first mass, then function. Bones grow big before their final cause, the muscles, do so; muscle is bulky before it is skilful; brain is full-sized long before it

understands itself. It is matter of plausible conjecture, that a well-used brain grows in size up to middle life; but it seems to me that mere bulk is of small consequence compared with the increase in functional aptitude which we acquire in the school of the world; and which in declining years it is our duty so far as possible to defend from shrinkage and waste. Considering this later growth in a moral sense, we find that the responsibility for it is placed upon our own shoulders. We pass from youth with the degree of A.H., or *adultus homo*, which entitles us to practise in any court of the world, without further initiation fee; but our pranks, henceforth, are no longer to be considered as student-follies; we are our own president and faculty, and self-government becomes a solemn fact.

A pretty large percentage of those who read a chapter of this sort are more or less personally interested in the question of the tendencies towards insanity, and the means of neutralizing them. We care for our children and our relatives; so far as we can see our own case, we care for ourselves. In this chapter I wish to speak of that small class who are concerned about their own mental state; and of that larger class who ought to be so concerned.

As originally conceived, the plan of this little book laid stress upon the idea of Self-Control. A smaller book, by a Mr. Barlow, called *Man's Power over Himself to Prevent or Control Insanity*, had presented this idea in a forcible way, and it seemed worthy of expansion in a new form. Maturer

reflection enlarged the plan, of which this chapter represents the first phase.

In pursuing the idea of self-control we have assuredly a very valuable clew. I do not merely mean that we are in harmony with the Scriptures and with the wiser men of antiquity, but that there is a genuine connection between sanity and self-control.

A popular French comedy represents the worthy but excitable *père de famille* at a moment when something has "contraried" him seriously. His wife and female relatives exhort him to calm himself, but he vigorously replies: "I won't be quiet! I *want* to be angry — just as angry as I can hold!" Where is the use of being endowed with passions if we don't get pleasure out of them? The ideal of the savage is similar—"What is the use of drinking unless I get drunk?"

The effects of anger have been picturesquely described by sages and poets, with whose writing my readers are familiar. One of the most curious studies in this direction is Stanley Hall's thesis,[1] based on questions submitted by correspondence to a large number of persons. It is interesting to note among these the frequent expressions of regret, and the references to great pain and mental suffering, and even bodily exhaustion, which are associated with fits of rage in the personal experience of the writers.

Anger is perhaps the best type of a thing to be

[1] G. Stanley Hall, "A Study of Anger," *Amer. Jour. Psychology*, vol. x., No. 4.

controlled. It is a great gift—a man is incomplete without the power of indignation; we all agree that there must be something wrong in a person who is not angry in certain cases, but is it not worth while to have the power to control it, if only with regard to our own interests ?

Outside of the great passion of healthy, justifiable, controllable anger, there is a wide field of affections which are morbid, in that they go far beyond the justification. Many of us go about full of bottled wrath and fretfulness, like a big spider full of venom with which we sting those who get in our way. If we needed them for our food, as the spider does flies, we might have a justification. But we do not need. The better way would be to hire some one to "paddle" us efficiently, and so draw out the irritation through the skin; or to take a walk or a run or to visit the gymnasium. Perhaps a cup less of coffee, or less meat or eggs, or less of the heady beverages that are drawn from wood and bottles, or a more judicious supper, may cut off the tap-root of the bastard weed, nervous irritability. Or perhaps tobacco ? How we slide into the narcotic habit, unconscious what is hurting us until it costs a revolution to undo the harm! It is like our municipal affairs; people do not care much about abuses until they are grown unendurable, and then there is a universal upheaval and a casting out of offenders. Gout is becoming more common in America than it used to be; one's temper is apt to be bad in gout, or, if you please, in other morbid

concoctions of the humors, and here is a good chance to regulate temper by diet. Sedentary habits, want of fresh air, muscular indolence, with many people determine ill-temper as one determines sleep by morphine. Do we know one or two nice things that upset us ? and is it not human nature to go on trying them again and again in the false optimism of self-indulgence ?

What petty things these all are,and yet how they ruin half the pleasure of life ! So be it; some of them are petty; but not so with gout, for instance, which is a red flag showing where a side track switches off towards insanity. Not so with the irritability of overworked nerves, which warns of nervous prostration; or the irritability of tea and coffee, which may either be an index of nervous instability already acquired, or may help on towards the acquisition.

There is no doubt in anyone's mind of the pernicious effect of starving the body; it starves the nerves, resistant and stubborn though they are to the effects of starving; it lays a foundation for almost any kind of nervous disease—neuralgia, morbid pains in queer spots, sleeplessness, mental irritability, and breakdown. Now, people differ greatly in their powers of eating. Some must have an interval of ten hours between meals; most are best with four or five hours; but not a few are benefited by putting in a slight repast between meals,—I do not mean the spoiled child's appetite which wants candy before dinner. Starvation of the nerves is also com-

monly effected by lunches of toast with strong tea, or tea alone. Neither tea, coffee, spirituous wines, nor the ordinary extract of beef are a proper foundation for a noon meal; they are all delusive, all substitute stimulus for nutrition, and lead to nervous ruin.

I believe there is a lurking feeling in favor of passion in the minds of highly moral people. They express it when they remark, "What a relief it is to swear a little, sometimes!" The position thus held is unscientific. It is now understood that grimaces and gestures expressive of violent feeling tend to increase the feeling by a sort of reflex action; which fact lies at the basis of what is called " working oneself into a passion." A calm posture calms the mind.

It is not, in fine, irrelevant to call attention to the fact that the classes of human beings who are typically subject to explosions of anger are the epileptic and the feeble-minded. By the side of these we may range the victims of poison, as seen in alcoholic frenzy and the temporary insanity of the hashish eater.

That a fit of rage may be the " psychic equivalent " of an attack of epilepsy (with convulsions left out) is a rather startling doctrine, when we apply it to ourselves.

The doctrine of equivalence can be also used to show us the safe way out of an attack: for as we give to excitable insane patients work to do with the hands, so we may treat our own honored selves to a

turn at the carpenter's bench, or, lacking that, may supply the muscular equivalent with gymnastics.

The main object of this chapter, however, is to point out the mental rather than the physical agencies for strengthening the mind to resist the invasion of insanity. Now, if we entertain doubts as to the facts, we are merely wasting time in discussing these agencies. If we are living under the fatalistic impression which is so easily brought on by hearing of one or two strong cases of heredity, or by partial reading of cases, the whole argument in regard to self-control will take a goody-goody aspect, and will seem a perfunctory preachment on the author's part. I must therefore ask the reader to make it clear to his own mind whether he has any doubt whatever that character is built up; whether or no he has a share in the building; whether he has the power of choosing between different ways of spending his time; whether he has even a fractional power over himself in fixing or in diverting his thoughts. The argument rests on considerations like these, which the reader may apply for himself.

One who lives with the insane comes to recognize that they are often perfectly responsible for their good or bad behavior; perfectly aware, too, that their peculiar status protects them from punishment. They may deliberately take advantage of this impunity to perpetrate horrid crimes. On the other hand, we see that on certain occasions they are far more able to control themselves than one

would suppose; at chapel services, theatricals, lectures, dances, they put themselves on their good behavior and observe the proprieties remarkably well. Are not the sane also amenable to motives for self-guidance in a far higher degree ?

The pith of the matter seems to lie in this, that mind and body each act on the other. If physical fatigue may depress the spirits, a motive for hope or good cheer will take away fatigue. Fear of cholera kills hosts; a stubborn will to live has kept death from many a sick man. Courage, hope, cheerfulness, turning the thoughts outward, activity in the unselfish directions, and a clear head withal, combine to affect the vital processes favorably: circulation, respiration, digestion, are improved under their influence, and fatigue and pain are banished.[1]

The fatalistic view creeps in again under the guise of, " Happiness is after all a matter of temperament — we are *born* happy or the opposite." If that view is cheering and helpful, cling to it! But do not deliberately adopt it that you may have an excuse for remaining unhappy.

[1] Dr. Wilson has some very interesting remarks on the mental physician's point of view, as he conceives it. " By all means," he says, " let us exhaust the full resources of the physical method, but at the same time let us avail ourselves of the spiritual. After all, the spiritual relation of brain cells is as big a thing and as important as their chemistry. Iron and strychnine, phosphorus and Indian hemp, are very potent remedies; but so also are fear, doubt, hope, confidence, interest, enthusiasm. Moral causes overturn many a mind and brain, and moral causes may restore them."—*Clinical Studies in Vice and in Insanity*, by George R. Wilson, M.D., 1899, p. 126.

The reader will pardon the assumption of a hortatory tone. The practical application now follows.

Social relations, companionship, friendship, are of the greatest value, and are a good deal under our own control. We can have too much of them; but with the average man society is as necessary for the mind as oxygen for the body. It is not merely a question of mental quickness — it may be a matter of sanity or its loss.

In the wide wastes of plain, bearing no vegetation but the sage-bush and grass, the life of a cattle-herder upon a range is intensely lonely and monotonous. I have been made acquainted with such a case, in which several of the men became successively insane under these influences. The owner has succeeded in applying a remedy. She (it happens to be a lady) makes appeal to her friends in the cities for the gift of old magazines and novels and other light reading for the use of the cattlemen, and finds that the remedy meets the case.

Dr. H. P. Stearns[1] has forcibly presented the isolated life of some farmers' wives as follows:

> The currents of thought and care have gone on day after day, and month after month, from early morning until late at night in one ceaseless round; wakeful and anxious often for children sick, for children who are to be clothed and fed and schooled; anxious in reference to the thousand and one household cares which never lift from the brain of such a mother; with no intellectual

[1] *Insanity: Its Causes and Prevention*, p. 204.

or social world outside the dark walls and many times illy ventilated rooms of her own house; with no range of thought on outside matters; with no one to interpose or even understand the danger; with no books to read, or, if she had, no time to read them;—in short, with no vision for time or eternity beyond one unending contest with cooking, and scrubbing, and mending,—what wonder that the poor brain succumbs! The wonder rather is that it continues in working order so long as it does without becoming utterly wrecked. More fresh, health-giving air, more change, more holidays, more reading, more gossiping, more of almost anything to change the monotony of such a life, to break the spell which so holds these poor women, and to lead their minds in pastures more green, and by rivers whose waters are less stagnant and bitter!

A cloistered life not only tends to narrow one's round of ideas and judgments, but it gives an open field for the operations of a class of agencies which specialists recognize as leading towards insanity — insistent ideas, haunting thoughts, impulses which keep dogging one's steps. The feeling that one has committed a social blunder, or that some one else has snubbed us, or that we have just lost some great opportunity, or have done an injustice, or caused pain, or in a hundred possible ways have transgressed the line of social or religious obligation, — this feeling, common to all of us, is, with some, based on an element of character which actually threatens sanity. It is quite possible to nurse such feelings for the sense of excitement they give, for the same reason

that one may like the sensation of anger. There is a gratification in self-reproach, for it seems like a kind of retribution. There are also those who, after the loss of a friend by death, cherish and try to perpetuate the first feelings of anguish, and reproach themselves when time lays a healing hand upon the wound. When possessed by these morbid cravings for suffering, these self-torturings acquiesced in by a stagnant will, the remedy is outside of ourselves; our best friend may be the merest stranger whom we accost in the market and who obliges us to think for a moment in a new direction. We cannot suppress such trains of feeling directly, by a fiat of will, but we can divert them. The next best thing to a friend is an occupation; and in the long run an occupation fills very much the larger space in our lives.

Self-absorption, or downright selfishness, is a frequent trait in insanity. We excuse it in the insane, but in ourselves we have no right to it. Living much in ourselves is immoral; self-examination is alternately self-flattery and self-pity, and its whole tendency is towards an unbalanced state of the faculties.

Much of this morbid habit has been fostered by the romantic utterances of the poets and sages, of which we find a plenty in the eighteenth century. A contemplative mind like Wordsworth's may find it wholesome to spend much time in vigorous lonely walks amid grand and fascinating scenery; a Thoreau may be at his best in a wild wood; and how

many a tired citizen is but too thankful to camp out where there is nobody but a guide to speak to! But the morbid or affected character of much of the nature-worship of the romantic school of Chateaubriand's day is now happily seen in its true light. There is a tinge of this quality, I suspect, even in so sensible a work as Feuchtersleben's *Dietetics of the Soul*, where we read: "Let men say what they will in praise of society. The most they can say of it is that it teaches us to know our duty; but from solitude alone can we derive happiness." [1]

And as for diaries, there are two sorts: the objective, which chronicles oneself only as one among many other incidents, and makes material for future history; and the subjective, which is practically the liturgy of self-worship, the consequence and the cause of tendencies to inward deterioration.

"A hypochondriac whom I attended," says Feuchtersleben, "became convalescent from the moment that I prohibited him from continuing a journal which he kept of his condition." [2]

A correct insight into one's own character is necessary. But the habit of self-analysis, self-introspection, self-punishment, is not the way to reach this knowledge. The evolution of our character is a matter of contact and comparison with others, taking the best as our standard; the more of outward experience and contacts we have, on a fair footing of give-and-take, the wiser our judgment

[1] Translation published by C. S. Francis & Co., 1854, p. 144.

[2] *Principles of Medical Psychology*, Sydenham Society, 1847.

unconsciously becomes in regard to our own condition.

Although there is a danger in the enthronement of deductive logic, yet there are cases in which a general principle has been well made out, from which inferences of great value can be drawn. A few of these may be briefly discussed here.

One important general principle, bearing directly on the genesis of mental disease, relates to the necessity of providing suitable outlets for the existing energies of mind and body. Taken by itself, the principle would involve letting people gratify every propensity, irrespective of morality. There is certainly a mental stress involved in resistance to propensity; and if the avoidance of stress were the only consideration in life, propensity would carry the day in more ways than it now does. But I must leave morality to defend itself; our concern is now with other considerations. I propose to notice the mental damage which may be wrought by neglect to employ faculty; using, first, a notable historical case.

The mental affliction through which John Bunyan passed, between the ages of twenty and twenty-four, is instructive in more ways than one, if we accept the able analysis[1] of Professor Royce. This wonderful and untaught genius was of an irritable, nervous constitution, which in childhood showed itself by terrible dreams in which devils and wicked spirits were prominent actors. His education was extremely meagre. As a young man, his

[1] *Studies of Good and Evil.*

social gifts and his æsthetic tastes displayed themselves in a passionate attachment to dancing and chime-ringing. His native power of language, queerly enough, found vent in an extraordinary copiousness of profane expressions. He had also the habit of amusing himself on Sunday with outdoor sports. Soon after his marriage he gave up the two latter indulgences, and subsequently wrenched himself away from dancing and even from bell-ringing. He was now without amusements; he was without an outlet for his most characteristic powers and tastes. Shut in to himself, with much reading of the Bible, he became a victim to "temptations," or, as we should express it, to the insistent idea of his own utter depravity — his chief "sins" being those I have mentioned. Suggestions, in the form of blasphemous solicitations, distressed him to the verge of endurance. At last all his temptations were concentrated upon the one idea, which "intermixed itself in almost whatever he thought" that he must "sell Christ"; to which at last, in utter weariness, he yielded.

This yielding plunged him in a fixed and deep melancholy. It did, however, set him entirely free from the racking anguish of "temptation," — the strain of perpetual mental antagonism to himself,— and may thus be said to have been the first step towards his recovery. Bunyan thus furnishes us an illustration of a second leading principle in mind-healing, namely, the value of submission to the inevitable. Perhaps we may compare this with the

influence of "power through repose," which has recently been praised for its good effects upon neurotic temperaments.[1]

At all events, upon Bunyan's restoration to health he joined in fellowship with a Christian church and assumed a set of duties which taxed all his powers until his death at the age of sixty. Constant preaching, and much writing, to the extent of sixty works, great and small, were the regimen which preserved him from relapse into his malady for the rest of his life. One need not seek for better testimony of the virtue of occupation as a mental tonic; or, in other words, of the necessity for an outlet for one's gifts.

No feature of modern asylum treatment has proved of greater value than the introduction of occupation for the insane. Work at the mechanic trades, at housekeeping, waiting, cooking, sewing, and all sorts of out-door labor on farms and roads, has proved an immense blessing. As for the theory of the way in which good is done, no one with an understanding of the needs of average human nature will require to be told of the comfort and strength that lie in regular habits, and the misery of *ennui*. For the inmates of hospitals, we may add to this the benefit of physical health accruing from the exercise.

Mr. Wyckoff, in his recent book, *The Workman*, gives a vivid account of the intolerable mental discomfort suffered by some lumbermen among whom

[1] See the book with this title by Annie Payson Call.

he was thrown on the occasion of an undesired holiday. They happened to be illiterate men, with no mental resources for off-days except the animal pleasures of a debauch in the settlement. An instructive contrast is offered in his own intense longing for contact with books, after a protracted voluntary absence from his home associations, while experimenting in the practical earning of his living by the labor of his hands.

Dr. Mercier[1] has some pointed remarks on retiring from business, which will bear quoting:

There is one other circumstance, connected with the means of livelihood, that is apt to produce stress in those who are subjected to its influence; and that is the sudden cessation of work by one who has been for many years accustomed to a uniform course of toil. The disappointment that is in store for those who have been looking forward, during a lifetime of toil, to the period of golden leisure that they shall enjoy in the evening of their days, has become a stock subject for the moralist for many generations. All have heard of the soap-boiler mentioned by Dr. Johnson, who, after selling his business, begged of his successor to allow him to come up on melting days and witness the operation; and the anecdote illustrates a state of things which is extremely common. A man who has all his life been in active employment, who has not only always had abundant outlet for all his activities, but who has, by long habit, so modified, and moulded, and trained his nervous system that a certain amount of activity is forthcoming every day, suddenly relinquishes his employment, and stops up the

[1] *Sanity and Insanity*, pp. 270, 271.

channels by which these habitually accumulating energies were habitually expended. What must happen is clear. The activities will not suddenly cease. The man may voluntarily relinquish the habitual modes of employing himself, but he cannot, at a few days' notice, so modify his nervous system as to cause it to abandon habits which have been the growth of a lifetime. The activities still continue to be felt. The energies still continue to be generated; but, cut off from their normal and habitual mode of expression, they accumulate; they become pent up; and, unless outlet is found for them, they will infallibly produce disorder. Hence we find that when a man in the evening of life, or about the time that was considered by the ancients his grand climacteric, retires from his business, he is subject to stress; and if by this time his energies have not much diminished, but are still very active; and if he has no alternative occupations in which he can find outlet for his unemployed activities, this stress is extremely likely to produce disorder. Within six months I have been consulted about five gentlemen, all of whom were becoming, or were, insane, from this cause. All of them were men of great bodily and mental activity, all about the same age, all had recently retired from active business, and — here is the significant fact—all of them were destitute of mental resources. Not one of them ever opened a book; not one of them had a hobby; not one of them cared for music or any form of recreation, with the sole exception of one who occasionally played golf, and one who occasionally played chess. Not one of them took any active part in social, municipal, or political life. It is remarkable that the cases of insanity arising from this cause usually exhibit the same symptoms. In all the above five cases

the patients were very wealthy men, and each one, upon relinquishing his business, sank into melancholia, and cherished the belief that he was miserably poor.

No one who stifles a legitimate impulse of feeling can be secure from the revenge it may hereafter take. The social proprieties; mistaken views of duty; the unconscious tyranny of the stern man over the cheerful; the false modesty which touches elbows with a neighbor for a year without speaking; the harsher forms of religious belief, with much else that might be mentioned, in life as we know it to-day, cause enormous waste of possible happiness, and therefore of health. Christianity at its outset burst asunder all these mummy wraps, and gave to the world the spectacle of a community which fully gratified in its members the *grande passion* of brotherly love — a greater power, perhaps, than the sexual passion which is commonly so called. A recent sect, with enthusiastic views of the matter of healing the sick, owes much of its rapid success (I have heard it suggested) to the warmth of kindly and equal brotherhood which welcomes the newcomer to their fold, and which fills the aching void in hearts that cannot be satisfied with material grandeur and a business life.

" Falling into a rut " is the besetting temptation of more advanced age. It is easier on the whole to do as we have previously done. There comes a time in life when the impulse for change and novelty grows weaker, and the surplus energy less; it

is then that we need an external or a novel stimulus. This is the period when the tendency to dementia, or the wasting away of mental power, comes in; and there is no doubt that this evil tendency is favored by the growing fixity and settledness of middle life — *das gesetzte Alter*,—with the preponderance of material interests and the reluctance to keep up with innovations, which belong to this age. This kind of settledness adds to one's comfort, in a way, but the indulgence in this comfort acts upon the intellect with a slowly numbing influence. I am not recommending that a man should change his business or his residence in middle life; but he is to be envied who can change, at the hour of closing business for the day, to some real interest of another sort, which has the power of attracting and pleasing. Many of us cannot like whist, but for those who do it is often a capital stimulant, and, at the worst, is better than dozing.

Occasional depression of spirits is a very common thing, even in sound and well-balanced minds. It is very important to draw the line between this occurrence and the form of insanity called melancholia. In the vast majority of cases, occasional depression has nothing to do with insanity or insane tendency.

Still, low spirits depress not only our feelings, but our powers. They egotistically turn the mind in upon itself; they interfere with duties and engagements, and prevent application to business. They probably weaken the sum total of the vital forces in a way not perceptible during the life of the subject,

but possibly acting as a factor of commencing deterioration in a following generation. The possibility of avoiding the attacks by a more judicious life ought to be insisted upon. There are causes, physical and moral, of many kinds, which it is one's business to seek for, not resting until the whole round of habits and actions have been put to the test: one's up-rising and down-sitting, one's eating and drinking, going abroad, company, exercise, dress,— nothing is trifling that has a great effect.

I wish, however, to make it plain that there is no justification in supposing that a person who is subject to fits of the blues is entering a path which leads to melancholia. As far as can be stated, low spirits act on the nervous system in a general way, as excesses and irregularities of life do, and the distant consequences are of the greatest variety of character. The mental training of a low-spirited and fearful temper should therefore be directed to the strengthening of the will and courage, to the bearing of responsibility, to self-control and the facing of duty. The cultivation of cheerfulness *per se*, of cheerfulness at all hazards, is not the summing up of the case; there are moods of sternness, there are hours of pain and stress, which also make for the soul's health.

Neurasthenia, nervous prostration or breakdown, is marked by low spirits, with decided lessening of mental endurance. The mental suffering may be great, but there is no derangement; it is not an insanity. Whether extreme and protracted cases

may shade off into insanity, and actually develop into it in normally minded persons, is a matter upon which there is some difference of opinion. An inherited predisposition to insanity would make the transition comparatively easy. But in point of fact a simple neurasthenia very rarely develops into insanity. It may distinctly influence the following generation, however, as a moderate predisposition.

It is in nervous troubles of this sort, with little visible bodily cause, that we see most brilliantly displayed the power of mental influence in bringing about a cure. I regard them as almost certainly curable, in part or in whole, by such methods.

A patient's fatalism in these matters is too often backed up by the physician's materialism, both combining to negative the influence of encouragement. Medical scepticism, aroused by the preposterous combinations, the "shot-gun doses," of the old time, has insisted on simplification, and on methods which at least enable us to judge what drug has helped the patient. But in doing this it has conscientiously put out of court the "disturbing element" of mental anticipation, and has made a practice of letting the drug do its work unaided. The attitude of the profession, it must be confessed, is at this day one of indifference to mental influences. They appear in an unscientific and therefore an undignified light to the man who is taught strictly to rely on the microscope, test-tube, and other instruments of precision. The omission of practical teaching in psychology from the list of required

studies has been suggested as another cause of this attitude. Through the door thus left open have come in various humane and sympathetic (however ill-balanced) doctrines of mind-healing, the results of which, thoroughly in accord with what we know of mental physiology, furnish most valuable confirmation of the view which is enforced in this chapter. The power of suggestion, acting imperceptibly upon the feeling of faith or confidence in a sufferer's mind, appears to be at the basis of these cures; and cures there are, far too numerous to be pooh-pooh'd.

While all classes of minds are open to the influences of suggestion and imitation, a much greater openness is noticed in children and in the uneducated. And these influences work in both directions. There are many facts which point to the prevalence of nervous disorders of psychic origin in the uneducated classes or the badly educated and "spoiled." The experience of Dr. James J. Putnam [1] leads him to include in this class the accident neuroses — the paralytic or nervous troubles which supervene at a more or less distant time after railroad or other accidents:

> The patients who suffer from the severe forms of these disorders are, strangely enough, of the mechanic or wage-earning class, who, although sturdy, and used to hardship of various sorts, are apt to be lacking in social and general experience, and are not trained in the sort of self-control that society expects from its members,

[1] Shattuck Lecture, 1899.

while, at the same time, their lack of a fixed source of income makes a period of enforced idleness a matter of great moment to them. They are not, as a rule, predisposed to neurotic inheritance, and have usually been strong and healthy, but the traditions of the community in which they were born and bred inculcate the instinctive belief that accidents are terrible events and lead to mysterious and complex troubles. To the patient whose mind is thus stocked with traditions and instincts sympathetic to misfortune there come next the startling and disabling circumstances of the accident itself, which dethrone the self-control and profoundly disturb the emotions and through them the action of the circulation and the heart; and to this is added the special "suggestion" furnished by some local injury or special fear. It is then as if someone had whispered to the demoralized patient, "Your arm will be paralyzed," or "You will be an invalid for years." These cases are extremely numerous, and immense sums are paid on them in damages.

A generalization of high importance is involved in the answer we may give to the question, "Whither is the human race tending; whither is our own section of the race tending; and what have we to hope or fear from such tendency?" In view of what we already know of the general rise of animal life, of the general uplift of intelligence from age to age in old geological time, and in view also of the rather scanty series of facts relating to the ascent of the line of mammalia to which we belong, we certainly have data for estimating our own position and prospects as a race. Man, the species, is moving along

a certain line. He has attained his present eminence by superior cerebral development. Along with this ascent, there is an associated tendency in the direction of progressive infirmity as regards certain parts of our bodily frame, of which no better instance can be given than the tendency to diminution of the size of the jaw, and lessening of the number of the teeth in man and his progenitors. In fact, the view is commonly accepted among those best able to judge, that the race of man, after a career of possibly some hundreds of thousands of years, is now showing some signs of having reached or passed the zenith of his anatomical perfection. He is now entering on the stage of senescence.

I think we can readily see the truth of this claim in some bodily details. We also observe an apparent increase, among civilized races, of mental disease and defective mental development, which can fairly be claimed as related to premature old age in the individuals affected. Granting, for the sake of the argument, that we are forced to admit that man is in his apogee, can we trace any connection between the practices of educators and this supposed tendency to decline? Is it likely that with the wisest and most enriched courses of training for body, mind, and soul, we can do anything to push forward the tendency to cerebral improvement; and, if so, is it wise for us to court such high fortunes? There is no question that pedagogy has such ambitions. Relying on the physiological law of human development by periods, she has

concluded that we ought to ascertain the time of life at which each faculty is rapidly maturing, and liberally to feed and educate the growing powers at such times, in due subordination to considerations of health. She tells us that the training which favors the broad and all-sided growth of psychic faculty is the best, on the whole, for the general health of the body, provided that the individual limits of power are not overpassed. She has apparently no fear that her efforts to improve the brain will tend to hasten senescence. Indeed, I do not think it fair to burden pedagogy with such a vast responsibility. But I certainly think the considerations advanced justify us in urging upon all concerned in education the adoption of a new criterion of success in the training of youth. I hold that all successful mental training is to be judged as such in proportion as the recipient can be shown to be improved in his physical vigor, his constitutional strength, his power of work and resistance. An education which does this justifies itself: an education which falls short of it is open to the suspicion of helping the race in the direction of degradation.

Other things being nearly equal, it is therefore seen that the physical quality of the graduates of school or college is an indispensable test of the ultimate value of the work of such an institution.

The laws of health are understood better than formerly, and the treatment of the insane has drawn benefit from the improved knowledge. With the coming of Pinel, passed away the theory of chains

and scourging; with the Friends, that of unnatural confinement and restraint; and in our own time we are reaching out to a wider extension of the principle that what is good for the well is good for the invalid. The lesson of a century is that common sense is the wisest and the last of lessons to be learned.

If one wishes for rules to guide to mental sanity, they may be had in observing the treatment of the insane in the best asylums of our day. But rules are not much wished for. The prevalent spirit of the time is that which is admirably expressed in the quotation which follows[1]:

In place of a health-seeking instinct in America, we have a feeling which says, "I do not mind how hard a strain I have, provided I can hold out till I get through it." We are too much employed to think much of the discomfort of moderate fatigue and ill-health. Neither have we sufficient feeling respecting the permanence of the family to lead us to plan for a succession of descendants. An American says, "I had rather have forty-five or fifty years of active, satisfactory life, than sixty or seventy years of a comfortable, dawdling existence"; and, if we look at the case only as it affects himself, we cannot especially condemn the reasoning, but when we consider the constitution that this overstrained life bequeaths to the children, it assumes a different aspect.

In conclusion we may say that no fixed set of rules is likely to be of use in all cases alike, for those

[1] Mary E. Beedy, *Education of American Girls.*

who have reason to dread the advent of insanity, either from hereditary tendency, or from neurotic constitution. Those who seriously wish to take care of themselves ought above all things to find occupation. If neurasthenic, let them find a wise physician and be cured; and let him explain to them the limits of their natural force, to guide them in their work. The social must overpower the selfish element, and the universe must cease to revolve around the ego. Dissipation and all unwholesome living must yield to whatever contributes to vigor of constitution. And if anything remains to be said, let every one consider how real, how consistent with mental science, is the beneficial influence of a hopeful spirit and the habit of looking on the bright side. Religion and Science can join hands in praising the great triad, Faith, Hope, Charity; or, as *Lend a Hand* expresses it, the act of "Looking up and not down, looking forward and not back, looking out and not in."

CHAPTER VI

OUR SOCIAL AND CIVIC DUTIES

"Sir, wherefore, since over this place is the way from the City of Destruction to yonder gate, is it that this plat is not mended, that poor travellers might go thither with more security?"

Pilgrim's Progress.

THE amount of actual insanity at the present time is of less importance than the rate of its increase. In regard to neither do we possess accurate information. The number of the insane reported by the United States Census for 1890 is 106,485, which is estimated as about one half of the probable actual number of cases. But the increase (which is the matter of chief concern) is found, both in Europe and America, to have been so rapid, during the last half-century, as to arouse alarm. In England, from 1849 to 1894, the insane population nearly quadrupled, while the total population hardly doubled. In Scotland, between 1859 and 1894, the number of insane persons to every hundred thousand of population rose from 192 to 325—an increase of seventy per cent. in the frequency of its occurrence. In Ireland, during thirty years (1862–1892), the population diminished by twenty per cent., while the actual number of the insane

more than doubled. In Massachusetts, during fifteen years (1878–1893), the resident insane increased annually six per cent., while the general population gained only about three per cent.

These figures present the affirmative view in a strong light.[1] It is but fair to say that strong arguments have been offered upon the other side also. The Scotch Lunacy Commission, in a supplementary Report, December 21, 1894,[2] point out that a rapid increase in the registered insane population follows the erection of new asylums; that popular feeling in favor of asylum treatment is increasing; that a continually wider circle is included in the enlarging definition of insanity. A special report from the English Commissioners in Lunacy, February 22, 1897, takes similar ground.

A part of the apparent increase has been unquestionably due to the increase of accuracy in census-taking, and the increased facilities for receiving patients in hospitals — a case where the market creates the supply. As Clouston says: "Admission to hospitals for the insane will increase for many years to come, not from any positive increase of insanity at all, but from a more extended realization by society, of every grade, of the benefit and convenience of such hospitals." Another part of

[1] From article by Mr. F. B. Sanborn in the *New Haven Conference of Charities*, May, 1895.

[2] Compare the article on "Statistics of Insanity," by Dr. Tuke, in the *Dictionary of Psychological Medicine*, especially remarks on ratio of *first attacks* to total population.

the increase is due to the better care taken of the insane, which greatly prolongs their lives and produces a large accumulation of chronic incurable cases. It is remarkable, however, that the increase seems to be still rapid at the end of the nineteenth century, after more than a hundred years of improvements in care and treatment. The weight of evidence seems to lean in favor of an increasing proportion, both of the insane in bulk and of the number of new cases occurring yearly.

The degeneracy of various kinds traceable in the human race is so frightful in amount that any means within reach should be seized upon to lessen it. The proposal has been seriously made to revert to the customs of the old Spartans and put to a humane death all the defectives, in order to eliminate *pro tanto* the possibility of their defects mingling by descent with the strain of normal humanity.

Whatever may be the arguments in favor of this proposal, it may be said that there are too many people who believe in "the right to live" to permit its serious consideration. Among legislators and their constituents there are few who are not conscious of defect within themselves, or within the circle of family and friends; all are bound by the personal tie. Besides which there is a feeling that we have not yet tried all means — we do not yet know what may be done in the case of insanity, and still more in that of crime, to relieve or cure the victims. There are, however, less stringent measures,—expensive, indeed, but humane and just,

—admittedly binding on the government, which if carried out would greatly lessen the number of defectives born. I refer in the first instance to the custodial care of the classes known as the insane, the feeble-minded or idiotic, the epileptic, inebriates, criminals, tramps, and paupers. In each class the object should be to restrict, or wholly prevent, the propagation of a new generation.

The following data are given by the United States Census for 1890:

Insane	106,485
Feeble-minded and idiotic	95,609
Prisoners	82,329
Juvenile delinquents	14,846
Paupers in almshouses	73,045

The first two of these data are unquestionably much below the truth, for reasons explained by the editor of the census. As regards the feeble-minded there is doubtless a special reluctance in many cases to state the harsh truth in regard to one's relatives.

An estimate is here offered for 1900, as follows:

Insane	180,000
Feeble-minded and idiotic	200,000
Epileptic	130,000

See remarks in the Appendix.

The educative forces of the community, the religious forces, the police, punitive, and reformatory forces, the forces working for sanitary improvement and the relief of poverty, are all combating the evils

in which insanity is rooted. The philanthropic aspect of the problem is obvious. Its economic side, however, is beginning to come more prominently into view. It is an enormous question, involving the custodial care of half a million, and perhaps more, of the insane, the feeble-minded, and the epileptic — not to speak of the inebriates.

From data drawn by Mr. F. B. Sanborn[1] from the State Board of Charities' report, it appears that in Massachusetts insanity is the most important of all the causes of permanent pauperism. In 1864, of the total number fully dependent upon public support, one in four was insane, and this ratio has been increasing until in 1895–1898 it was more than one in two!

While asylums, in the old sense of the word, continue to have their use, considered as hospitals, it has become obvious of late years that there are better and more economical ways of caring for a large part of the cases. The acutely insane are usually sick people, often requiring careful nursing. After this stage is passed, very many can be placed in "cottages," or buildings of moderate size adapted to ordinary life, containing (as at the celebrated Alt-Scherbitz establishment) from ten to thirty residents, among whom the family feeling is cultivated. The establishment of chronic patients on a farm, under the direction of one or two practical farmers, has proved a financial success under the direction of the Utica asylum.

[1] *Charities Review*, December, 1898.

The village of Gheel, in Belgium, where the harmless class of insane are permanently boarded among the farmers, one or two in a house, forming a part of the family and sharing in its labors, has been the centre of a great deal of scientific curiosity, and it may be said to have borne the test well. In Belgium there now exists a second, much smaller village establishment at Lierneux, in the southern part of the kingdom, conducted in the same way as Gheel. France has one with five hundred patients at Dun-sur-Auron in Berri, founded in 1891. Something similar has been established in villages near Bremen and Hamburg. Scotland has a similar plan, but prefers to distribute the boarders among a large number of different villages.[1]

The existence of a chronic state of crowding, with disgraceful lack of accommodation, in most of our State asylums, is a curious parallel to the failure of our great municipalities to keep pace with the increase in their school population. An increased activity of the public conscience will doubtless lead to a remedy of both conditions. It is worth while to care for the insane. For the new cases, hardly any amount of attention, medical, physical, and by way of nursing, can be too great while the chances of recovery are still large. For a very large mass of cases fully diagnosticated, long treated, but continuing in an unprogressive or declining state, the Gheel system, the Scotch method, and the farm

[1] A good account of these peculiar village establishments is given by Toulouse, *Les Causes de la Folie*, 1896.

colony furnish conditions of life which are far more pleasing to the patient, because more in the line of human life, than asylums can possibly be, and unquestionably more conducive to mental improvement. The superior economy of these methods will soon cause their general adoption for patients of this class.

It is admitted by all who have to treat the insane that many cases apply for treatment too late; that there is a strong tendency on the part of the public to put off the necessary but painful step of a medical inquest, so that the period of the disorder in which it is most easily controlled is neglected, and not a few cases are permitted to run into positive insanity which could have been checked if attended to earlier.

Dr. Frederick Peterson of New York has proposed the establishment of certain institutions, to be known as "Psychopathic Hospitals," to which those who show tendencies to acute derangement may be taken in the early stages, without waiting for the symptoms to become so marked as to justify the physician in declaring them insane. The sick may be sent to such hospitals on the simple request of an attendant physician, just as would be done in ordinary cases of sickness, and may be kept under care for a fortnight, during which time either convalescence may occur, or the disease may develop into forms requiring asylum care. In his plan, the State is to be asked to build and support one such hospital in each of the largest cities.

Dr. Hurd has recently [1] urged the establishment of such "detention hospitals," and also of out-patient departments for the treatment of insanity by alienists. He believes that many cases of neurasthenia or melancholia might be thus treated in the beginning of their disorders and cured without needing to enter an asylum.

The dread of an "institution" keeps many from receiving early treatment which might save them from a severe, perhaps incurable mental disorder. The modern methods, being more natural, are helping to break up this superstitious feeling. It is pleasant to be able to mention that at the present time one half of the inmates at McLean Insane Hospital came by their own application.

Dr. Stephen Smith of New York, during his connection with the State insane asylums in the character of State Commissioner, took occasion to urge the introduction of a feature which in some ways would have been the equivalent of Dr. Peterson's plan. His proposal was, that each patient on admission should be isolated from the insane and be placed in a separate room, under the charge of a competent attendant devoted especially to him and selected with reference to adaptedness to the patient's education and character; that for a certain time, perhaps a week, this special oversight should be kept up with a view to a careful study of symptoms; meanwhile winning the patient's confidence and ascertaining, if possible, the cause of the attack,

[1] *American Journal of Insanity*, vol. lvi., No. 2, 1899.

as far as it might be of a psychical nature—a delusion, for example. The increased expense of this system might be expected to be balanced by the saving of a certain number of persons from prolonged illness or permanent dementia; to say nothing of the point of humanity.

Dr. Smith illustrates his position by an experience of his own. While officially visiting one of the institutions for the insane, his attention was called to a man, recently admitted, whose frantic behavior disturbed the whole ward. The doctor determined to see how far he could influence the man by a private interview. Taking him aside, he privately and significantly hinted at the possibility of his getting out of the asylum "if he would do exactly as directed." Using this motive, he gradually calmed the man's wild explosions, and by degrees got him to tell what brought him to that place—money difficulties, and a fixed idea of his wife's infidelity. A stern and absolute denial of the possibility of the latter was again and again urged, until the man could no longer maintain it, and broke down in tears and submission. He was then strictly warned by Dr. Smith to be on his very best behavior for the few days following, and to write suitable apologies to those wronged by his suspicions. No intimation of all this was given to the authorities; but on the doctor's next visit he learned that the man had behaved so absolutely sanely that he was discharged in a few days. He remained sane.

There can be no doubt that this "mental" or

" suggestive " treatment would have been infinitely more difficult a fortnight later. At some point of time, we must suppose, such cases pass into a definitive condition of insanity, in which, both legally and clinically, they have to be set apart from other men. Yet even after the disease has fully declared itself the mental influences which can be brought to bear are many. Relief from the pressure of one's neighbors and kin is to many an irritated and suspicious mind a blessing, and a positively sanative agent. The sympathetic, impressive presence of a physician is a great help to a mind in need of guidance.

The need of minute individualization is more urgent in insanity, especially in regard to its psychical side, than in any other complaint, as has been pointed out by Griesinger and Krafft-Ebing. If we are to have psychical treatment of an intelligent sort — not that of routine and mechanism — we need a great deal of direct personal contact between physician and patient. It appears not unlikely that this class of influences is destined to occupy the professional mind more than heretofore in relation to all the psychoses.

In promoting the recovery of the insane, and in providing for their welfare after discharge, an opportunity for a most beneficial work analogous to that of the " prisoner's friend societies " lies open to the philanthropic. In Europe the " sociétés de patronage," or guardian societies, are firmly established; Dr. Jules Morel mentions about twenty of

them in his article in the *Twenty-Sixth National Conference of Charities Report*. See article by the same writer on "Prophylaxis of Mental Diseases," in *American Journal of Psychology*, vol. v., No. 1, 1899.

The first weeks after discharge from an asylum, when its shelter and support are withdrawn from one perhaps not quite fitted to face a coldly questioning world, may be of critical importance in determining the final outcome. No more truly Christian act can be named than friendly sympathy given at that time. Such attentions form a part of the work of the societies I have described.

The Craig Colony for Epileptics, at Sonyea, N. Y., is one of the most prominent of recent attempts to improve the condition of that class. It occupies a large tract purchased from the Shakers, and aims to occupy the inmates with farming, housework, and to some extent with trades, replacing drug-treatment by abundant physical exercise. The original of the idea was found in the great establishment at Bielefeld in Germany, founded by Pastor von Bodenschwingh.[1] The institution is intended for one thousand patients when completed. Seven were discharged as cured, *i. e.*, as having had no attack during two years, in the year ending September, 1898.

A recommendation was made in the Craig Colony

[1] See *Care and Treatment of Epileptics*, by Wm. Pryor Letchworth, 1900; also *A Colony of Mercy*, by Julie Sutter, which describes Bielefeld.

report for 1898 in favor of giving some small compensation to patients whose services exceed the cost of their keep. The English have adopted a system of this kind in Broadmoor State Criminal Asylum, and find it a financial success.[1]

The insane are commonly reckoned as about three in one thousand of the general population; the idiotic and feeble-minded may not number as many, but if the "backward" are taken in, the class is trebled.

The number of feeble-minded in institutions in the United States is very small compared with those at large in the community — perhaps one sixteenth. An enormous work remains to be done in this direction, and one which promises to do more for the suppression of degeneracy than any other measure likely to be undertaken. The very idea of marriage between persons of this class is frightful. No morbid entailment is more certain than that of a feeble mind in the progeny of this class; and yet such marriage is generally permitted to take place in the absence of State laws forbidding it. There is such a status as feeble-mindedness, as deadly to the hopes of posterity as syphilis, but differing from the latter in being absolutely incurable; for, however much we may do to train feeble minds, we can never bring their native powers to a normal grade.

This class of the population should be, one and

[1] Mercier, *Lunatic Asylums: Their Organization and Management*, p. 90.

all, brought within enclosures, educated, and kept in celibacy as State wards during their lifetime. Some will always remain mere animals, helpless and incapable. A considerable part, however, can be so brought up as to be physically strong enough to enjoy rough labor: these can be colonized, as the State of Massachusetts is now seeking to do with a certain number of adult men, for whose use a tract of three square miles has been purchased in a rough, uncleared country, where they may live as pioneers and farmers. Similar measures have been adopted by Wisconsin, California, and Ohio. A comparatively small part are enabled to earn their living in trades: it is these that give the most anxiety, lest they marry and continue their breed.

The feeble-minded are often exceedingly difficult to deal with at home. They are apt to be restless, mischievous, strange-tempered, and a menace to the peace, even the lives, of those they are with. It may be reckoned that every such child brought into an asylum sets free two or three adults from a grievous burden, which doubtless has often contributed to drive the mother into insanity.

Of all classes of women the feeble-minded are those most in need of protection.

A feeble-minded girl is exposed as no other girl in the world is exposed. She has not sense enough to protect herself from the perils to which women are subjected. Often bright and attractive, if at large they either marry and bring forth in geometric ratio a new generation of defectives and dependents, or become irresponsible

sources of corruption and debauchery in the community where they live. [W. E. Fernald.]

Bearing in mind that the feeble-minded are probably as numerous as the insane; that only a probable six per cent. of them are guarded in special institutions; that of the rest large numbers are in poor-houses, or jails, or tramping, with the exposures implied, we cannot wonder at the statement that a very large proportion of the illegitimate children are the offspring of this class.[1]

The broad outlook of the following citation[2] will justify its presence here:

There is no field of political economy which can be worked to better advantage for the diminution of crime, pauperism, and insanity, than that of idiocy. The early recognition of some of its special, upper, and more dangerous forms should be followed by their withdrawal from unwholesome environments and their permanent sequestration before they are pronounced criminals and have, by the tuition of the slums, acquired a precocity that deceives even experts. Only a small percentage should ever be returned to the community, and then only under conditions that would preclude the probability of their assuming social relations under marriage, or becoming sowers of moral and physical disease under the garb of professional tramps and degraded prostitutes. How many of your criminals, inebriates, and prostitutes are

[1] "The majority of the imbeciles who owe their defectiveness to heredity are born outside the marriage relation."—*Charities Review*, June, 1899, p. 192.

[2] Dr. Kerlin, National Conference Charities and Correction, 1884.

congenital imbeciles! How many of your insane are really feeble-minded or imbecile persons, wayward and neglected in their early training, and at last conveniently housed in hospitals, after having wrought mischief, entered social relations, reproduced their kind, defied law, antagonized experts and lawyers, puzzled philanthropists, and in every possible manner retaliated on their progenitors for their origin, and on the community for their misapprehension! How many of your incorrigible boys, lodged in the houses of refuge, to be half educated in letters and wholly unreached in morals, are sent out into the community the moral idiots they were at the beginning, only more powerfully armed for mischief! And pauperism breeding other paupers, what is it but imbecility let free to do its mischief?

There are, however, those whose social antecedents lift them above the classes which we have just described. Ireland has the following to say of these:

I have seen individuals who had sufficient mental power to pass college examinations, take degrees, and even gain prizes, who were so manifestly unfit to conduct themselves in the ordinary affairs of life, that they were a laughing-stock to the most ignorant people around them. Most of the imbeciles described by Trélat in his striking book, *La Folie Lucide*, are simple-minded people, often with a tinge of insanity. Imbecile girls not unfrequently find husbands in France, where the marriages are arranged by the parents, and a dowry will make almost any young woman pass muster in the matrimonial market. I knew of an instance of the kind myself when living at Avignon. Trélat portrays, in an

eloquent and touching manner, the misery of such connections, which often hand down the curse of imbecility or insanity to another generation. Dickens has, in *David Copperfield*, given a beautiful picture of an imbecile girl, whose tender and loving nature gained the heart of an inexperienced and imaginative young man.[1]

Most of the inmates of our institutions for feeble-minded are likely to remain there for life. There are cases in which exceptions may properly be made. The matter of self-support may be considered important. A young person who has been trained to orderly and moral habits may be thus placed in his or her own family, or otherwise, if found suitable. Ireland considers that very few so placed are likely to think of marriage.

The weak-minded do not appreciate the ordinary motives for controlling their sexual passions as others do. Their lack of self-control in this respect is often a source of great annoyance to those who have them in charge, and of injury to themselves. Experience has shown the immense importance of bringing them up in the practice of hard bodily work, enough every day thoroughly to fatigue them and bring sound sleep. If this plan can be carried out consistently, under the eye of the institution, and supplemented by transfer to agricultural colonies when adult age is reached, the best thing is probably done for the welfare of the unfortunate defective.

But there is another view, which is urged by the

[1] W. W. Ireland, *The Mental Affections of Children*, 1898, p. 339.

weight of much authority. For the protection of society against untoward accidents, it is widely believed that sterilization or castration should be performed, at all events upon boys, where it is expected that they are to be brought back from school into their family or into society, as is occasionally desired. The consent of parents or guardians must *always* be obtained.

I am permitted to insert the following statement, made by the gentleman whose name appears and who has taken a strong professional interest in the question:

In three cases, Dr. W. W. Keen of Philadelphia has castrated boys so idiotic and feeble-minded that they could never be responsible for their actions. In such boys the sexual appetite is sometimes exceedingly strong (as was the case in two of the three instances cited) and might easily lead them to do harm to young women without being morally responsible for it, or might render them liable to become the victims of designing women who might wish, in case of well-to-do or wealthy parents, practically to levy blackmail. It is also very undesirable that such boys should ever have any children who would be similarly weak-minded.

Of course in each instance the hearty co-operation and consent of the parents had been secured before the operation.

It is well in these cases to defer operation until after the change in the boy's voice, so that there would be no such obvious evidence of the operation as would otherwise exist.

It is a question whether a similar operation (the removal of the ovaries) should not be done in the case of girls of similar weak minds, of course with the full consent of their parents.

A considerable number of cases have thus been operated upon in the Michigan Home for the Feeble-minded and Epileptic, with the result of improving the moral status. A small number of epileptic boys, whose condition and habits rendered them practically unmanageable, were operated on at Monson, Mass., with results which were considered very favorable. At a similar institution in Kansas, much popular objection was raised against the operation, upon apparently good grounds quite apart from the scientific merits of the question.

The question of applying this operation to the feeble-minded is practically new, and cannot be regarded as settled in all its bearings. If defective young men are to be brought "into society," with its temptations and its artificial idleness, to gratify the irrational wishes of parents, the dangers indicated by Dr. Keen become a matter for serious consideration, and may well be guarded against by following his suggestion. Where, however, it is feasible to keep the patient under custodial observation from childhood up, in rural surroundings, with wise educational treatment and abundant hard labor, it seems to me consistent with his best welfare to dispense with the operation. This would doubtless be equally true of the sons of the rich.

The merits of the operation of ovariotomy, in the

present connection, are much in question, and the results are often disappointing. Some very serious consequences have been noted, including insanity. In a general way it may be added that, while the woman is indeed rendered incapable of bearing children, her passions are not lessened, and her power of doing moral mischief, if so inclined, is increased; in fact, un-moral weak-minded persons have been known to accept the condition as a sort of free license to transgress.

Marriage is a civic function, in which the citizen enters on a new relation to the state. The state makes the parent responsible for the maintenance and the morals of his offspring, and it has the implied right (though scarcely recognized by statute) to expect that the offspring be well born. At present most of the responsibility for this must be borne by the citizen as an individual. If we are to have laws against the marriage of defectives, a public sentiment must precede their enactment.

As regards the marriage relations of the insane, and the special statutory regulation of marriage with a view to lessen morbid inheritance, there is room for some difference of opinion. It has been suggested that the existence of insanity, or even of epilepsy or drunkenness, in either party, should be a bar to marriage when the woman is within the supposed age of child-bearing, *i. e.*, under forty-five. It is obvious that there might be difficulty in discriminating in such cases, and that hardship or injury to interests might arise. The marriage of the

clearly feeble-minded is not likely to occur among the educated classes, but a deterrent penalty ought to be affixed for the sake of society at large.

The Connecticut law of 1895 forbids, under penalty of three years' imprisonment, the marriage, where the woman is under forty-five years of age, of a man and woman either of whom is epileptic, imbecile, or feeble-minded.

A Pennsylvania law inflicts the penalty of six months' imprisonment or $500 fine or both on persons knowingly celebrating, procuring, or abetting the marriage of the insane or feeble-minded, or of one insane in the past from natural as distinguished from accidental causes; the same penalty for the principals.

There are certain things which the contracting parties to a marriage have a right to know, and the concealment of which attaches bad faith to the party who conceals. There is nothing which, it should seem, the engaged party has a better right to know than the fact of the other party's having formerly been insane, or syphilitic, or epileptic; and it is apparent justice that the concealment of such facts should form cause of annulment of marriage.

Drunkenness is recognized as a very prolific source of mental and bodily degeneracy, including insanity. While it is certainly true that many cases of intemperance are due to a morbid inheritance, it is also true that the drinking habit is largely within the reach of control by judicious legislation. Leaving the question of restriction upon sales undiscussed,

we find that the manner of the infliction of the usual penalty for drunkenness is open to serious objections, as fostering and fixing the habit rather than breaking it up. In Massachusetts, at the present time, it is in the power of the courts to sentence a person to confinement in asylums for inebriety, as is done in insanity: the principle of compulsory State treatment of diseases dangerous to the public health has thus been made to apply to this eminently dangerous disorder, with satisfactory results. Elsewhere in the United States, commitment of inebriates is made by criminal procedure.

No permanently good condition can exist in asylums, reformatories, and prisons while they are allowed to remain subject to the caprice of spoil-seeking partisanship. It is the plain duty of all good citizens to unite in keeping these institutions out of the reach of those corrupt conditions popularly called "politics," which at this very moment are inflicting disgrace upon the administration of many States.

APPENDIX

I. WORKS ON THE PREVENTION OF INSANITY

THE following works, of a more or less popular character, have fallen in the way of the author. The list does not profess to be complete.

BARLOW, JOHN. *On Man's Power over Himself to Prevent or Control Insanity.* Communicated to the members at the Royal Institution of Great Britain, May 26, 1843. London: Wm. Pickering.

BLANDFORD, GEORGE FIELDING. "Insanity," in vol. xii. of *Twentieth Century Practice of Medicine;* see section on "Prevention," pp. 221–235.

FEUCHTERSLEBEN, ERNST, FREIHERR VON (died 1849). *Zur Diätetik der Seele;* also (translation), *The Dietetics of the Soul,* edited from the seventh edition. C. S. Francis & Co., 1854.

JACOBI, MARY PUTNAM. "The Prevention of Insanity, and the Early and Proper Treatment of the Insane," *Journal of Social Science,* No. xv., 1882.

MAUDSLEY, HENRY. *The Pathology of Mind: being the third edition of the second part of the "Physiology and Pathology of Mind," recast, enlarged, and rewritten.* 1880. See Chapters III., IV., and V. on the "Causation and Prevention of Insanity," pp. 82–225.

MERCIER, CHARLES ARTHUR. *Sanity and Insanity.* ("Contemporary Science Series.") 1890.

RAY, ISAAC. *Mental Hygiene.* 1863.

STEARNS, HENRY PUTNAM. *Insanity: Its Causes and Prevention.* 1883.

TUKE, DANIEL HACK. *Insanity in Ancient and Modern Life, with Chapters on its Prevention.* 1878.

II. CHARACTER AS DETERMINED BY ENVIRONMENT OR HEREDITY

(Page 39)

A series of articles, with the title "Environment *versus* Heredity," by several leading experts in institutional work, appeared in the *Charities Review* for 1899. The conclusions are of value as being the result of experience, and are probably fairly representative of the opinion of a majority of this class of workers in our own country.

Mr. Nibecker, House of Refuge, Glen Mills, Pa., considers that character is not inherited, but that the environment in which a child is placed determines his character almost absolutely, in so far as the limitations of his physical constitution and quality allow of variation. In an investigation involving several hundred pupils, it appeared that the only ones who could be considered incorrigibles were deficient in brain quality, being capable of receiving instruction to a certain extent and of a certain kind, and then coming to a standstill: yet even of these, many afterwards lead blameless lives. In the forcing surroundings of a low, degraded life, the children surviving are precociously developed and their characters are fixed to an extraordinary degree at an age

before those in normal conditions of life begin to harden at all into shape.

Mr. Chapin, of the Lyman School for Boys, Westborough, Mass., says that among the three hundred at that time in the school, he could find perhaps twenty who bore the evidence of heredity, which they will always carry with them, and it is very doubtful if they can outgrow it or overcome it. He inclines to believe that the effects of environment are nearly as difficult to change after the child becomes sixteen or seventeen years old as the apparently permanent effects of heredity: habits are fixed, and the enormous effort of will and fixed purpose requisite to change them are not found as often as one could wish.

Elizabeth Kew, of the Children's Aid Society, Philadelphia, states that the experience of that society for sixteen years shows that children from the ranks of pauperism and crime, if taken when under eleven years of age, and placed in carefully selected homes, almost always turn out well.

Sarah M. Crawford, State Board of Charity, Boston, speaks of children placed to board, one or two in a family, in suburban towns. Most of them are foundlings, or infants deserted by parents of bad character. "We have never had a complaint from a single family where a little girl has been adopted, and I can recall but three or four boys who have not fulfilled our highest expectations."

Lyman P. Alden, of the Michigan State School for Dependent Children, has more faith in the power of environment than he had ten years ago, but its transforming power requires time—usually many years.

Mr. Briggs, of the Rochester Industrial School, has had numerous boys committed to the school who had

been adopted by good families while very little, and had been well-behaved when small, but became uncontrollable at the age of puberty.

III. MASTURBATION

(Page 76)

Among the assigned causes of insanity the practice of self-abuse is often mentioned. The subject is of great importance to parents and those engaged in educational or reformatory work; but it is so involved in medical considerations that it cannot be fairly and fully discussed in the present book. Those desirous of seeing the question treated broadly and wisely may do well to refer to Dr. T. S. Clouston's classic work, *Clinical Lectures on Mental Diseases*, page 482. The *Dictionary of Psychological Medicine* (1892), by J. Batty Tuke, M.D., contains very valuable articles on Masturbation, Sexual Perversion, and Sex in Insanity. *Clinical Studies in Vice and Insanity*, by Geo. R. Wilson, M.D. (1899), has most interesting discussions, pages 150–157.

IV. STATISTICS OF THE DEFECTIVE CLASSES

(Pages 83, 148)

The data are at best only approximations. It is perfectly understood that census returns of the defective classes are far below the probable true numbers, at least in the United States. As regards the basis of the estimates here offered: Insane persons are reckoned at somewhat less than 3 in 1000 of the population; the feeble-minded (imbeciles and idiots) are doubtless as numerous (Dr. Fernald estimates 4 in 1000); the proportion

of epileptics varies considerably in different European countries, but for the United States we may follow Dr. Spratling of Craig Colony, who considers 1 in 600 as a conservative estimate.

As to the "backward" children, the recent examination of 100,000 school children in England discovered that about 1.6 per cent. of those in school were physically or mentally deficient to a marked extent, so as to profit little by ordinary education, and to require special classes in order to give them a reasonable chance of becoming intelligent citizens and to relieve the asylum schools (*Charities Review*, April, 1900). Philadelphia reports 1122 children as too backward for instruction by ordinary methods in large classes, besides others excused from attendance and many in the special schools for truants and incorrigibles,—in all about one per cent. The *Report of the United States Commissioner of Education*, 1897–98, vol. ii., p. 2509, states the number of the feeble-minded in institutions as 9232; of the deaf, 10,878; of the blind, 3774. The census returns of the total number of deaf and dumb were 40,592; of the blind, 50,568.

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